WOODS HOLE OCEANOGRAPHIC INSTITUTION

REFERENCE NO. 66-12

THE DISTRIBUTION OF CHLOROPHYLL IN THE WESTERN INDIAN OCEAN DURING THE NORTHEAST MONSOON PERIOD

FEBRUARY 13 - JULY 16, 1965

by

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WOODS HOLE, MASSACHUSETTS

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TECHNICAL REPORT

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Department of Biology

The Distribution of Chlorophyll in the Western Indian Ocean during the North East Monsoon Period February 13 -- July 16, 1965

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David A. McGill and Thomas J. Lawson, Jr.

This report contains the observations of phytoplankton pigment characteristics made during ATLANTIS II Cruise No. 15 in the western Indian Ocean and its reaches during the period of February 13 through July 16, 1965. As pointed out in a previous report for this region (Laird et al., 1964), the observations should by no means be considered synoptic since short-term variation will occur in biological measurements. The value of the present observations is greatly enhanced by the fact that they repeat and extend the previous data from ATLANTIS II Cruise No. 8 for the area, but are taken at the opposite period of the year for all regions. The data permit only a first approximation of the relative fertility in the area, yet the seasonal contrast becomes an important consideration in the analysis and interpretation of the data. It is believed that this represents the first such large-scale survey for Indian Ocean waters.

The method for measurement of the pigment fractions has been described by Yentsch and Menzel (1963). One liter of sea water was used in all observations. This water was collected using modified Van Dorn closing bottles (non-toxic) spaced at ten depths from the surface to 200 meters. This cast was usually made just prior to the main hydrographic cast at

each station. Particulate matter was concentrated from the water by filtration through a Gelman membrane filter, type GM-4, 47 mm diameter and 0.8μ pore size. Over half of the samples were processed aboard ship, while the remainder were sorted frozen in a dessicator and read in Woods Hole after completion of the survey. Fluorescence from the 85% acetone extract was measured for the total pigment content (F_o). Each 5 cc sample was then acidified with 0.1 ml of 10% HCL and reread (F_a). An estimate of the pigment fractions contributing to the total pigment content was made from the ratio of the two readings (F_o: F_a). With some samples a 3 cc cell was used in place of the normal 5 cc cell in the fluorometer. Resulting readings required a correction to make them equivalent to the rest of the data.

For computation of chlorophyll, a specific absorption coefficient of 66.7% has been used, as in the data of Laird et al., 1964. Recent tests indicate that this value may be as much as 20% too low and thus the chlorophyll values would be high by this amount. Phaeophytin values are not significantly altered (Yentsch and Menzel, 1963). For the 1963 cruise data, glass fiber filter of 4.0μ pore size were used which were later found to be subject to some loss of chlorophyll. This was corrected by use of a magnesium carbonate barrier. The two cruises gave comparable estimates of the mean productivity for the region surveyed. Samples read after prolonged storage may be subject to some deterioration (Yentsch, 1965b) but this factor was randomized in both cruises and thus cannot be separately evaluated.

The analytical results of the 1965 data survey are presented in

Appendix 1. The first column represents values for the chlorophyll pigment fraction, composed primarily of chlorophyll a, as determined from the F_o: F_a ratios. The correct formula for this is found in Yentsch (1965a) following the demonstration by Carpenter that the ratio deviates from linearity toward higher chlorophyll percentages in about the middle of the range of ratio values. The second column gives the phaeophytin pigment fraction values which are obtained by subtracting column 1 from column 3. The third column shows total pigment values, taken from the unacidified (F_o) readings. These values, like the preceding, are given as milligrams per cubic meter for each depth on a station. These total pigment concentrations correspond with the values reported by Laird et al. (1964). Column four lists the amount of total pigment under a square meter of sea surface, obtained by integrating the values of column three from the surface to 200 meters.

The integrated total pigment values are contoured in the distribution pattern shown in Figure 1. This pattern may be compared with that shown from the 1963 data, which is redrawn as Figure 2. In both cases, the integrated pigment values greater than 50 mg/m^2 are shown in shading. The southwest monsoon data of 1963 is notable for some extremely high values concentrated mainly in the area off Cape Guardafui and Socotra in the upwelling regions associated with the Somali Current. No such condition exists in the data of 1965 and the northeast monsoon apparently fails to provide any nutrient enrichment in the open ocean. The maximum obtained in 1965 was south of the Equator near the Seychelles and amounted to only 20-25% of the highest values obtained previously.

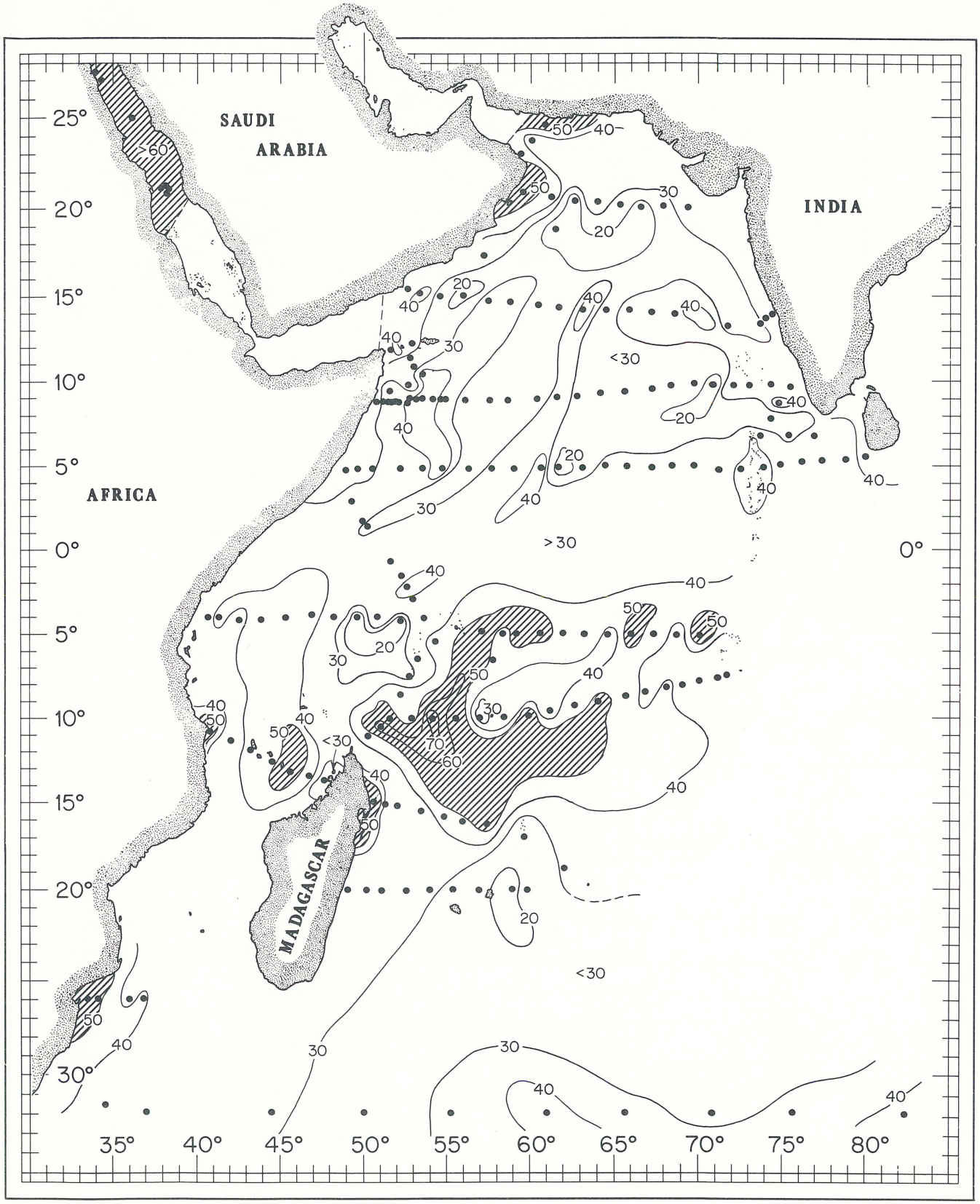

Figure 1. Distribution of total pigment concentrations (mg/m^2) for 0-200 meters obtained during the Northeast Monsoon period, 1965

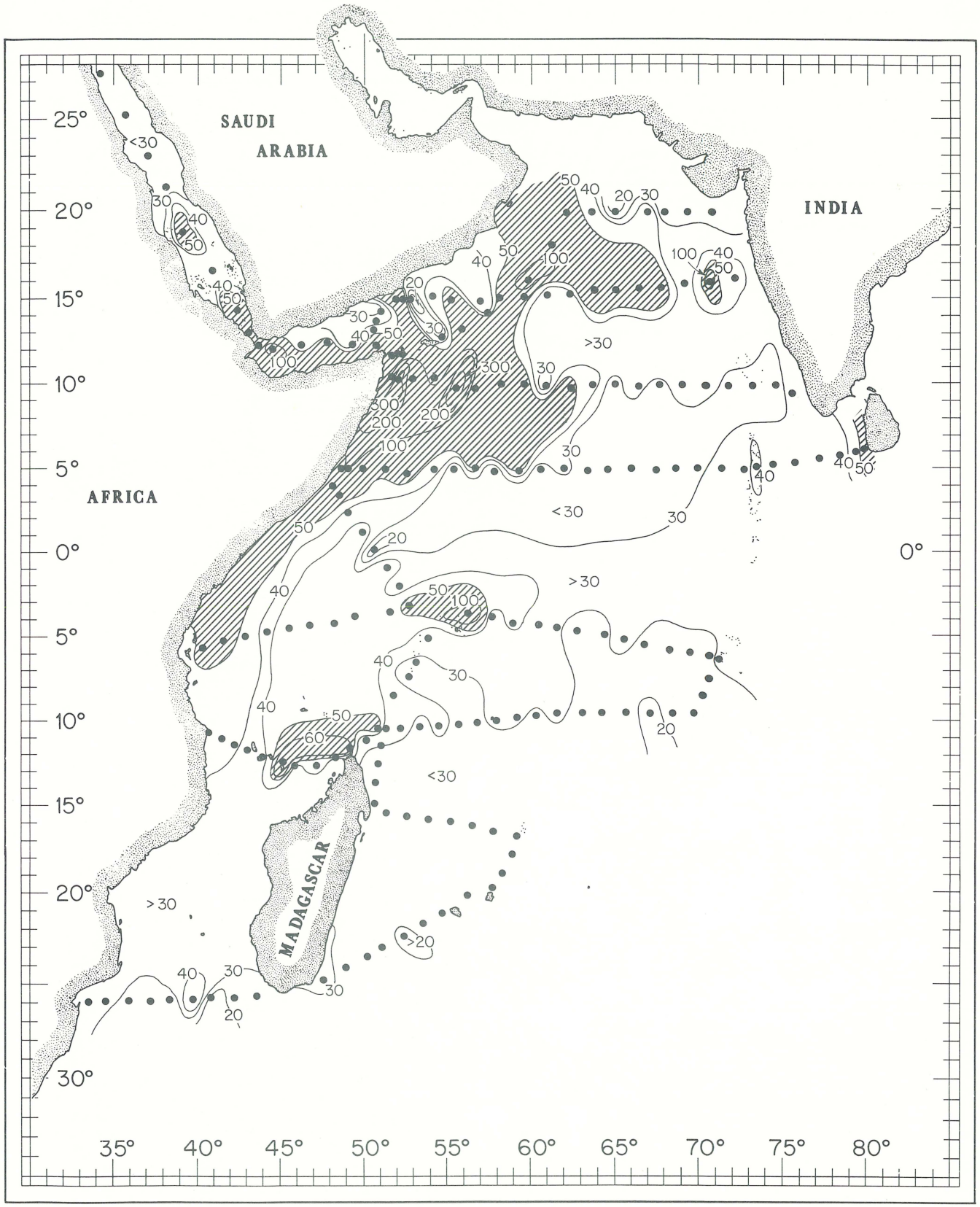

Figure 2. Distribution of total pigment concentrations (mg/m^2) for 0-200 meters obtained during the Southwest Monsoon period, 1963.

Table 1

Integrated Total Pigment Concentrations compared for 1963 (Southwest Monsoon) and 1965 (Northeast Monsoon) Surveys by ATLANTIS II

Range of Integrated Total Pigment Concentrations from surface to 200 meters (mg/m^2)	Percent of Stations* 1963	1965
Less than 25	19.0	15.7
25 -- 50	55.5	72.1
50 -- 75	12.7	10.7
75 -- 100	9.0	1.5
100 -- 125	1.1	0
125 -- 150	1.1	0
Greater than 150	1.6	0

*Includes Red Sea Stations

This distribution is reflected in a determination of the percentage occurrence of regional total pigment values within selected ranges. In both sets of observations the majority lie within values of 25-50 mg/m^2, but the distribution for the 1965 data is much more leptokurtic, with no values above 100. The comparison of the 1963 and 1965 data is given in Table 1.

The skewness in the 1963 data is mainly confined to the region of the North Indian Ocean in the vicinity of the Somali current. This is also shown by an evaluation of the mean values for integrated total pigment concentrations, as in Table 2. In the 1965 data, regional variations are not great whereas in the 1963 data values north of the Equator are considerably higher than elsewhere and serve to raise the level for the total western Indian Ocean by 1/3 over that found in 1965. The increased chlorophyll values near the Somali region in 1963 may be correlated with the incidence of upwelling in this vicinity (Bruce, 1965) and the increased availability of essential nutrients.

It should be pointed out that the 1965 stations in the Red Sea (#537-544) showed an increase in the integrated pigment values, as opposed to the general decline from 1963 values observed throughout the North Indian Ocean. The mean level for the Red Sea was 2½ times as great as the mean for the North Indian Ocean. These estimates may reflect seasonal blooms, but the data on the hydrographic conditions of the Red Sea during the winter months are too scanty to permit a detailed evaluation of the situation.

Table 2

Area	Mean value for Integrated Total Pigment Concentrations from Surface to 200 meters, with 95% confidence interval. (mg/m^2)	
	1963	1965
North of Equator*	54.29 ± 4.36 (104)	31.06 ± 2.69 (119)
South of Equator	33.52 ± 3.22 (89)	36.12 ± 3.46 (100)
Total Area*	44.19 ± 5.16 (193)	33.37 ± 3.56 (219)

*Includes Red Sea Stations

Stations #522-536 give data which is not included in any of the assessments for the rest of the area. These are samples taken in the Great Bitter Lakes, a shallow embayment of the Suez Canal system. If the mean integrated pigment value for 0-10 meters is extrapolated to the depths equivalent for the other data, the resulting value is five times the mean for the North Indian Ocean and twice that for the Red Sea. This high concentration of chlorophyll was possibly related to the accumulation of sewage from the discharge of ships in convoy awaiting passage through the Suez Canal.

The F_o: F_a ratios for the 1965 Indian Ocean survey are given as a frequency distribution for each depth in Figure 3. In the upper 50 meters, most of the observations show a range of ratio values from 1.7-2.1. This

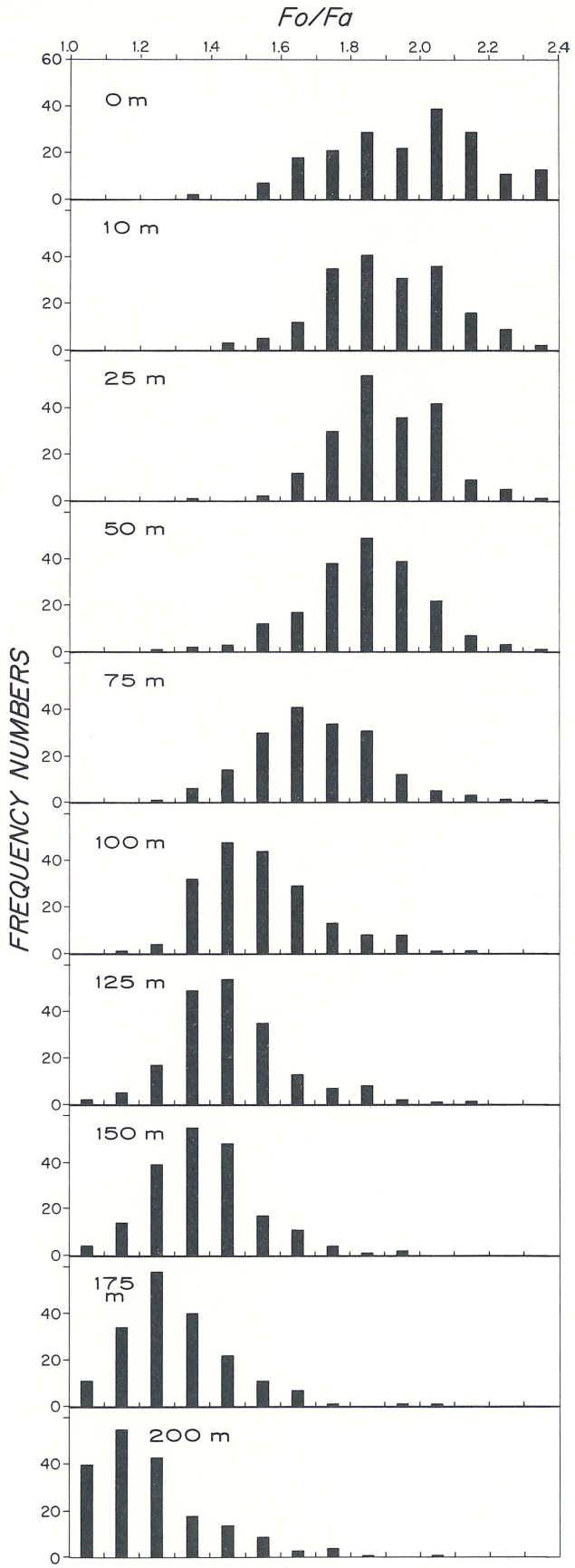

Figure 3. Distribution of fluorescence readings before and after acidification (F_o:F_a) for the 1965 data in the Indian Ocean, by depth.

increase in the range over that shown by Yentsch for 1963 data (Yentsch, 1965a Figure 2) results from the use of hydrochloric acid rather than oxalic acid for conversion of the chlorophyll to phaeophytin (Yentsch and Menzel, 1963; Yentsch, 1965). Below 50 meters the F_o: F_a ratio decreases with depth, with the mode shifting to lower ratio values near 1.3 below 100 meters. The mean value from the frequency distribution at each depth may be converted to a percentage value for the chlorophyll a content. Such values for the two sets of data are given in Table 3. The slightly reduced chlorophyll percentages in 1965 may be a further indication of the greater stability of the water column during this period. Yentsch (1965a, p. 658) states:

> "Water masses of high stability have considerably less total pigment. In stable water masses the depth where maximum concentrations of total pigment, chlorophyll and phaeophytin occur is deeper than in less stable water masses, and the depth at which chlorophyll and phaeophytin concentrations become equal is shallower."

Phaeophytin values are always low, but show some increase with depth relative to the amount of chlorophyll a. In general, the total pigment maximum lies at a depth of 50 meters or more. Lorenzen (1965) has pointed out the general relation between the pigment maximum and the thermocline. It is apparent that the high total pigment values from 1963 in the North Indian Ocean represented a much larger production of chlorophyll in the surface layer in the Somali Current vicinity. The stations at 9°N are shown in Yentsch (1965a, Figure 3) and clearly demonstrate the effect of the monsoon season and its attendant upwelling on the general transoceanic level of productivity.

Table 3

Mean Percentage of Chlorophyll in Total Pigment Analyses for Selected Depth Levels, derived from a frequency distribution of the F_o: F_a ratios of individual stations

Depth	1963 Acidified with Oxalic Acid	1965 Acidified with Hydrochloric Acid
Surface (0 Meters)	81%	74%
10 meters	81%	70%
25 meters	82%	70%
50 meters	74%	65%
75 meters	62%	55%
100 meters	50%	42%
125 meters	40%	37%
150 meters	28%	30%
175 meters	26%	24%
200 meters	27%	19%

1963 values differ from those given by Yentsch (1965a, p. 658) due to a regrouping of data and inclusion of Red Sea values

Information on the relative pigment levels in data from all stations of the 1963 survey has been obtained from the field notes of the expedition. Comparison of the mean pigment levels for the 1963 and the 1965 data are given in Table 4 along with the 95% confidence intervals. The high productivity of the North Indian Ocean is reflected in the statistics for mean values of the respective pigments. In 1963 the chlorophyll values north of the Equator were 67% of the total pigment, while in 1965 they accounted for 71.5%. South of the Equator the chlorophyll level in 1963 was 69%, while in 1965, it was 71% of the mean total pigment. Such a broad statistical evaluation minimizes the details of regional variation. It does point out, however, the relative contribution of chlorophyll and phaeophytin to total pigment throughout the euphotic zone in tropical and semitropical waters.

Table 4

Mean Value and 95% Confidence Interval for the Pigment Fractions analysed North and South of the Equator

Mean Chlorophyll *a*. (mg/m^3)		
North of Equator*	0.2025 ± 0.0103 (1029)	0.1153 ± 0.0042 (1083)
South of Equator	0.0897 ± 0.0045 (889)	0.1338 ± 0.0045 (895)
Total Area*	0.1502 ± 0.0060 (1918)	0.1237 ± 0.0031 (1978)
Mean Phaeophytin (mg/m^3)		
North of Equator*	0.1002 ± 0.0038 (1029)	0.0456 ± 0.0015 (1083)
South of Equator	0.0662 ± 0.0020 (889)	0.0602 ± 0.0022 (895)
Total Area*	0.0845 ± 0.0013 (1918)	0.0521 ± 0.0032 (1978)
Mean Total Pigment (mg/m^3)		
North of Equator*	0.3028 ± 0.0255 (1029)	0.1609 ± 0.0102 (1083)
South of Equator	0.1560 ± 0.0125 (889)	0.1940 ± 0.0112 (895)
Total Area*	0.2347 ± 0.0151 (1918)	0.1758 ± 0.0074 (1978)

*Includes Red Sea stations

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APPENDIX 1

Phytoplankton Pigment Concentrations

for Stations 522-777

ATLANTIS II Cruise No. 15

STATION: 522
DATE: 2/13
TIME: 14.0
LATITUDE: 30°21.3'N
LONGITUDE: 32°21.0'E

Station 522

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.915	0.085	1.00	7.50
10	0.43	0.07	0.50	

STATION: 525
DATE: 2/13
TIME: 18.0
LATITUDE: 30°21.8'N
LONGITUDE: 32°21.6'E

Station 525

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.925	0.055	0.98	7.85
10	0.49	0.10	0.59	

STATION: 529
DATE: 2/13
TIME: 22.0
LATITUDE: 30°17.8'N
LONGITUDE: 32°24.3'E

Station 529

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.955	0.065	1.02	8.80
10	0.68	0.06	0.74	

STATION: 530
DATE: 2/13
TIME: 23.5
LATITUDE: 30°19.6'N
LONGITUDE: 32°23.0'E

Station 530

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.965	0.095	1.06	10.55
10	1.015	0.035	1.05	

STATION: 532
DATE: 2/14
TIME: 09.5
LATITUDE: 30°20.6'N
LONGITUDE: 32°24.6'E

Station 532

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.90	0.00	0.90	8.00
10	1.76	0.17	1.93	

STATION: 533
DATE: 2/14
TIME: 10.8
LATITUDE: 30°22.3'N
LONGITUDE: 32°23.1'E

Station 533

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.65	0.10	0.75	5.80
10	0.81	0.08	0.89	

STATION: 535
DATE: 2/14
TIME: 12.7
LATITUDE: 30°19.6'N
LONGITUDE: 32°22.1'E

Station 535

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.81	0.05	0.86	8.65
10	0.79	0.08	0.87	

STATION: 536
DATE: 2/14
TIME: 13.2
LATITUDE: 30°17.3'N
LONGITUDE: 32°24.6'E

Station 536

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	1.27	0.14	1.41	4.30
10	0.84	0.13	0.97	

STATION: 538
DATE: 2/15
TIME: 11.5
LATITUDE: 27°43.5'N
LONGITUDE: 33°53.5'E

Station 538

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.555	0.105	0.66	91.100
10	0.80	0.08	0.88	
25	0.145	0.095	0.24	
50	0.27	0.10	0.37	
75	0.295	0.095	0.39	
100	0.38	0.13	0.51	
125	0.34	0.14	0.48	
150	0.30	0.16	0.46	
175	0.32	0.13	0.45	
200	0.38	0.14	0.52	

STATION: 539
DATE: 2/15
TIME: 14.4
LATITUDE: 27°27.5'N
LONGITUDE: 34°14.5'E

Station 539

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.45	0.10	0.55	70.525
10	0.46	0.10	0.56	
25	0.585	0.135	0.72	
50	0.44	0.11	0.55	
75	0.36	0.09	0.45	
100	0.225	0.07	0.295	
125	0.02	0.20	0.22	
150	0.055	0.145	0.20	
175	0.085	0.025	0.11	
200	0.01	0.06	0.07	

STATION: 540
DATE: 2/16
TIME: (04.5)
LATITUDE: 25°28.0'N
LONGITUDE: 36°10.0'E

Station 540

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 541
DATE: 2/17
TIME: 17.5
LATITUDE: 21°17.0'N
LONGITUDE: 38°00.0'E

Station 541

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.12	0.03	0.15	64.950
10	0.04	0.08	0.12	
25	0.20	0.06	0.26	
50	0.69	0.40	1.09	
75	0.29	0.33	0.62	
100	0.16	0.16	0.32	
125	0.08	0.07	0.15	
150	0.02	0.04	0.06	
175	0.01	0.035	0.045	
200	0.01	0.02	0.03	

No samples were taken between stations 541 and 546.

STATION: 546
DATE: 2/26
TIME: 08.0
LATITUDE: 11°55.0'N
LONGITUDE: 51°40.5'E

Station 546

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.145	0.005	0.15	33.275
10	0.29	0.03	0.32	
25	0.24	0.03	0.27	
50	0.40	0.02	0.42	
75	0.15	0.04	0.19	
100	0.095	0.035	0.13	
125	0.04	0.01	0.05	
150	0.03	0.03	0.06	
175	0.01	0.04	0.05	
200	0.005	0.045	0.05	

STATION: 547
DATE: 2/26
TIME: 10.8
LATITUDE: 11°59.5'N
LONGITUDE: 51°55.0'E

Station 547

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.14	0.00	0.14	41.525
10	0.12	0.02	0.14	
25	0.20	0.04	0.24	
50	0.535	0.045	0.58	
75	0.29	0.02	0.31	
100	0.135	0.02	0.155	
125	0.155	0.025	0.18	
150	0.03	0.015	0.045	
175	0.04	0.03	0.07	
200	0.025	0.035	0.06	

STATION: 548
DATE: 2/26
TIME: 15.7
LATITUDE: 12°07.0'N
LONGITUDE: 52°02.0'E

Station 548

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.00	0.10	31.35
10	0.09	0.00	0.09	
25	0.165	0.015	0.18	
50	0.525	0.095	0.62	
75	0.13	0.04	0.17	
100	0.06	0.03	0.09	
125	0.05	0.02	0.07	
150	0.025	0.015	0.04	
175	0.02	0.02	0.04	
200	0.015	0.015	0.03	

STATION: 549
DATE: 2/26
TIME: 19.7
LATITUDE: 12°05.0'N
LONGITUDE: 52°32.5'E

Station 549

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.01	0.11	31.28
10	0.085	0.015	0.10	
25	0.08	0.02	0.10	
50	0.12	0.02	0.14	
75	0.25	0.06	0.31	
100	0.18	0.04	0.22	
125	0.07	0.035	0.105	
150	0.025	0.035	0.06	
175	0.015	0.025	0.04	
200	0.01	0.03	0.04	

STATION: 550
DATE: 2/26
TIME: 23.5
LATITUDE: 11°39.0'N
LONGITUDE: 52°20.0'E

Station 550

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.13	0.01	0.14	22.65
10	0.115	0.015	0.13	
25	0.09	0.02	0.11	
50	0.32	0.06	0.38	
75	0.09	0.03	0.12	
100	0.065	0.035	0.10	
125	0.03	0.02	0.05	
150	0.02	0.01	0.03	
175	0.01	0.02	0.03	
200	0.01	0.02	0.03	

STATION: 551
DATE: 2/27
TIME: 05.1
LATITUDE: 11°05.0'N
LONGITUDE: 52°58.0'E

Station 551

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
	0.24	0.03	0.27	26.00
	0.14	0.04	0.18	
	0.22	0.05	0.27	
	0.16	0.05	0.21	
	0.13	0.045	0.175	
	0.085	0.045	0.13	
	0.035	0.035	0.07	
	0.015	0.025	0.04	
	0.01	0.025	0.035	
	0.005	0.035	0.04	

STATION: 552
DATE: 2/27
TIME: 11.8
LATITUDE: 10°27.0'N
LONGITUDE: 53°28.0'E

Station 552

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.28	0.065	0.345	40.78
10	0.285	0.065	0.35	
25	0.28	0.11	0.39	
50	0.23	0.13	0.36	
75	0.145	0.115	0.26	
100	0.055	0.095	0.15	
125	0.03	0.08	0.11	
150	0.015	0.085	0.10	
175	0.015	0.045	0.06	
200	0.02	0.05	0.07	

STATION: 553
DATE: 2/27
TIME: 22.2
LATITUDE: 10°02.5'N
LONGITUDE: 52°35.0'E

Station 553

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
	0.205	0.015	0.22	19.725
	0.17	0.02	0.19	
	0.165	0.025	0.19	
	0.12	0.02	0.14	
	0.135	0.035	0.17	
	0.055	0.02	0.075	
	0.055	0.03	0.085	
	0.035	0.015	0.05	
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STATION: 554
DATE: 2/28
TIME: 06.2
LATITUDE: 09°42.5'N
LONGITUDE: 51°36.0'E

Station 554

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.19	0.01	0.20	30.95
10	0.18	0.04	0.22	
25	0.14	0.02	0.16	
50	0.23	0.07	0.30	
75	0.175	0.085	0.26	
100	0.145	0.075	0.22	
125	0.055	0.045	0.10	
150	0.025	0.015	0.04	
175	0.01	0.02	0.03	
200	0.005	0.015	0.02	

STATION: 555
DATE: 2/28
TIME: 13.0
LATITUDE: 09°04.0'N
LONGITUDE: 50°45.5'E

Station 555

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.13	0.00	0.13	22.225
0.13	0.01	0.14	
0.14	0.03	0.17	
0.195	0.025	0.22	
0.165	0.01	0.175	
0.06	0.02	0.08	
0.075	0.015	0.09	
0.04	0.025	0.065	
0.03	0.02	0.05	

STATION: 556
DATE: 2/28
TIME: 20.5
LATITUDE: 09°00.0'N
LONGITUDE: 51°04.0'E

Station 556

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.40	0.03	0.43	37.625
10	0.35	0.02	0.37	
25	0.43	0.05	0.48	
50	0.37	0.05	0.42	
75	0.16	0.03	0.19	
100	0.09	0.03	0.12	
125	0.02	0.02	0.04	
150	0.02	0.015	0.035	
175	0.01	0.02	0.03	
200	0.01	0.02	0.03	

STATION: 557
DATE: 3/1
TIME: 00.3
LATITUDE: 09°00.0'N
LONGITUDE: 51°25.0'E

Station 557

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.09	0.01	0.10	32.675
0.17	0.03	0.20	
0.17	0.04	0.21	
0.21	0.05	0.26	
0.285	0.06	0.345	
0.10	0.04	0.14	
0.04	0.04	0.08	
0.01	0.04	0.05	
0.06	0.06	0.12	
0.015	0.035	0.05	

STATION: 558
DATE: 3/1
TIME: 21.6
LATITUDE: 09°00.0'N
LONGITUDE: 51°47.5'E

Station 558

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.23	0.02	0.25	35.775
10	0.16	0.02	0.18	
25	0.16	0.02	0.18	
50	0.41	0.08	0.49	
75	0.155	0.045	0.20	
100	0.11	0.05	0.16	
125	0.065	0.015	0.08	
150	0.055	0.025	0.08	
175	0.015	0.015	0.03	
200	0.01	0.01	0.02	

STATION: 559
DATE: 3/2
TIME: (12.9)
LATITUDE: 08°55.0'N
LONGITUDE: 51°36.5'E

Station 559

Did not take samples.

STATION: 560
DATE: 3/3
TIME: 04.0
LATITUDE: 08°59.5'N
LONGITUDE: 52°10.5'E

Station 560

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.25	0.01	0.26	42.675
10	0.255	0.025	0.28	
25	0.20	0.03	0.23	
50	0.37	0.06	0.43	
75	0.33	0.08	0.41	
100	0.175	0.115	0.29	
125	0.09	0.02	0.11	
150	0.04	0.01	0.05	
175	0.02	0.01	0.03	
200	0.01	0.01	0.02	

STATION: 561
DATE: 3/4
TIME: (01.8)
LATITUDE: 09°05.0'N
LONGITUDE: 51°58.5'E

Station 561

Did not take samples.

STATION: 562
DATE: 3/6
TIME: 03.0
LATITUDE: 09°00.5'N
LONGITUDE: 52°38.5'E

Station 562

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.185	0.015	0.20	30.140
10	0.205	0.02	0.225	
25	0.175	0.035	0.21	
50	0.21	0.03	0.24	
75	0.225	0.155	0.38	
100	0.10	0.07	0.17	
125	0.01	0.02	0.03	
150	0.01	0.02	0.03	
175	0.01	0.01	0.02	
200	0.00	0.01	0.01	

STATION: 563
DATE: 3/6
TIME: (05.8)
LATITUDE: 09°13.0'N
LONGITUDE: 52°28.5'E

Station 563

Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
Did not take samples			

STATION: 564
DATE: 3/6
TIME: 02.0
LATITUDE: 09°05.0'N
LONGITUDE: 53°07.0'E

Station 564

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.15	0.00	0.15	41.745
10	0.15	0.02	0.17	
25	0.16	0.025	0.185	
50	0.45	0.09	0.54	
75	0.39	0.15	0.54	
100	0.075	0.04	0.115	
125	0.025	0.015	0.04	
150	0.015	0.015	0.03	
175	0.01	0.03	0.04	
200	0.005	0.025	0.03	

STATION: 565
DATE: 3/7
TIME: 14.0
LATITUDE: 09°01.5'N
LONGITUDE: 53°39.5'E

Station 565

Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0.15	0.02	0.17	44.475
0.075	0.025	0.10	
0.12	0.03	0.15	
0.29	0.08	0.37	
0.38	0.15	0.53	
0.145	0.145	0.29	
0.06	0.21	0.27	
0.02	0.025	0.045	
0.01	0.03	0.04	
0.03	0.03	0.06	

STATION: 566
DATE: 3/8
TIME: 04.5
LATITUDE: 09°00.5'N
LONGITUDE: 54°13.0'E

Station 566

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.145	0.015	0.16	40.663
10	0.145	0.015	0.16	
25	0.16	0.04	0.20	
50	0.38	0.125	0.505	
75	0.29	0.19	0.48	
100	0.135	0.125	0.26	
125	0.01	0.03	0.04	
150	0.00	0.02	0.02	
175	0.00	0.03	0.03	
200	0.00	0.03	0.03	

STATION: 567
DATE: 3/8
TIME: 17.0
LATITUDE: 09°00.5'N
LONGITUDE: 54°51.5'E

Station 567

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.09	0.00	0.09	37.725
10	0.08	0.01	0.09	
25	0.065	0.005	0.07	
50	0.45	0.03	0.48	
75	0.27	0.13	0.40	
100	0.185	0.135	0.32	
125	0.05	0.06	0.11	
150	0.02	0.02	0.04	
175	0.01	0.01	0.02	
200	0.005	0.015	0.02	

STATION: 568
DATE: 3/8
TIME: (22.8)
LATITUDE: 09°02.0'N
LONGITUDE: 54°42.0'E

Station 568

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 569
DATE: 3/9
TIME: 19.1
LATITUDE: 09°00.0'N
LONGITUDE: 56°06.0'E

Station 569

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.08	0.00	0.08	26.050
10	0.05	0.01	0.06	
25	0.06	0.01	0.07	
50	0.06	0.01	0.07	
75	0.46	0.07	0.53	
100	0.08	0.09	0.17	
125	0.04	0.03	0.07	
150	0.02	0.04	0.06	
175	0.01	0.02	0.03	
200	0.01	0.01	0.02	

STATION: 570
DATE: 3/10
TIME: 06.4
LATITUDE: 08°57.5'N
LONGITUDE: 57°27.5'E

Station 570

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.095	0.005	0.10	26.400
10	0.07	0.03	0.10	
25	0.07	0.01	0.08	
50	0.16	0.03	0.19	
75	0.29	0.21	0.50	
100	0.045	0.045	0.09	
125	0.055	0.045	0.10	
150	0.015	0.015	0.03	
175	0.005	0.015	0.02	
200	0.00	0.02	0.02	

STATION: 571
DATE: 3/10
TIME: 15.7
LATITUDE: 09°06.0'N
LONGITUDE: 58°51.0'E

Station 571

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.12	0.00	0.12	28.575
10	0.07	0.02	0.09	
25	0.115	0.015	0.13	
50	0.13	0.015	0.145	
75	0.44	0.08	0.52	
100	0.135	0.045	0.18	
125	0.03	0.04	0.07	
150	0.01	0.01	0.02	
175	0.01	0.01	0.02	
200	0.01	0.02	0.03	

STATION: 572
DATE: 3/10
TIME: 01.0
LATITUDE: 09°13.0'N
LONGITUDE: 60°13.0'E

Station 572

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.045	0.005	0.05	23.615
10	0.06	0.015	0.075	
25	0.06	0.02	0.08	
50	0.28	0.10	0.38	
75	0.25	0.17	0.42	
100	0.065	0.065	0.13	
125	0.04	0.03	0.07	
150	0.005	0.005	0.01	
175	0.005	0.015	0.02	
200	0.00	0.02	0.02	

STATION: 573
DATE: 3/11
TIME: 11.0
LATITUDE: 09°20.0'N
LONGITUDE: 61°35.5'E

Station 573

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.095	0.005	0.10	34.675
10	0.055	0.015	0.07	
25	0.095	0.015	0.11	
50	0.19	0.03	0.22	
75	0.69	0.05	0.74	
100	0.12	0.065	0.185	
125	0.025	0.015	0.04	
150	0.01	0.02	0.03	
175	0.005	0.015	0.02	
200	0.005	0.015	0.02	

STATION: 574
DATE: 3/11
TIME: 19.7
LATITUDE: 09°26.0'N
LONGITUDE: 62°56.5'E

Station 574

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.01	0.11	20.840
10	0.10	0.015	0.115	
25	0.115	0.015	0.13	
50	0.16	0.03	0.19	
75	0.195	0.075	0.27	
100	0.04	0.02	0.06	
125	0.03	0.03	0.06	
150	0.015	0.015	0.03	
175	0.01	0.02	0.03	
200	0.005	0.015	0.02	

STATION: 575
DATE: 3/12
TIME: 05.2
LATITUDE: 09°35.5'N
LONGITUDE: 64°19.0'E

Station 575

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.01	0.11	26.905
10	0.07	0.01	0.08	
25	0.09	0.01	0.10	
50	0.135	0.045	0.18	
75	0.36	0.07	0.43	
100	0.155	0.065	0.22	
125	0.01	0.04	0.05	
150	0.02	0.02	0.04	
175	0.01	0.015	0.025	
200	0.00	0.02	0.02	

STATION: 576
DATE: 3/12
TIME: 15.7
LATITUDE: 09°41.5'N
LONGITUDE: 65°41.0'E

Station 576

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.095	0.005	0.10	23.420
10	0.08	0.01	0.09	
25	0.06	0.005	0.065	
50	0.215	0.025	0.24	
75	0.26	0.06	0.32	
100	0.075	0.035	0.11	
125	0.045	0.035	0.08	
150	0.015	0.025	0.04	
175	0.005	0.015	0.02	
200	0.00	0.02	0.02	

STATION: 577
DATE: 3/12
TIME: 01.0
LATITUDE: 09°50.5'N
LONGITUDE: 67°02.5'E

Station 577

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.05	0.01	0.06	29.115
10	0.03	0.015	0.045	
25	0.02	0.03	0.05	
50	0.06	0.00	0.06	
75	0.29	0.14	0.43	
100	0.175	0.205	0.38	
125	0.05	0.07	0.12	
150	0.03	0.03	0.06	
175	0.005	0.025	0.03	
200	0.005	0.015	0.02	

STATION: 578
DATE: 3/13
TIME: 10.1
LATITUDE: 09°58.5'N
LONGITUDE: 58°29.0'E

Station 578

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.08	0.01	0.09	27.575
10	0.08	0.02	0.10	
25	0.09	0.01	0.10	
50	0.10	0.02	0.12	
75	0.20	0.04	0.24	
100	0.235	0.045	0.28	
125	0.09	0.07	0.16	
150	0.04	0.04	0.08	
175	0.035	0.025	0.06	
200	0.015	0.015	0.03	

STATION: 579
DATE: 3/13
TIME: 20.2
LATITUDE: 10°03.5'N
LONGITUDE: 69°43.0'E

Station 579

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.05	0.00	0.05	24.975
10	0.045	0.015	0.06	
25	0.04	0.01	0.05	
50	0.065	0.015	0.08	
75	0.19	0.035	0.225	
100	0.195	0.025	0.22	
125	0.135	0.115	0.25	
150	0.05	0.03	0.08	
175	0.03	0.02	0.05	
200	0.01	0.02	0.03	

STATION: 580
DATE: 3/13
TIME: 04.2
LATITUDE: 10°00.0'N
LONGITUDE: 70°54.0'E

Station 580

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.05	0.005	0.055	16.745
10	0.04	0.005	0.045	
25	0.06	0.01	0.07	
50	0.05	0.01	0.06	
75	0.115	0.025	0.14	
100	0.105	0.095	0.20	
125	0.04	0.04	0.08	
150	0.03	0.04	0.07	
175	0.00	0.02	0.02	
200	0.00	0.02	0.02	

STATION: 581
DATE: 3/14
TIME: 10.7
LATITUDE: 09°59.0'N
LONGITUDE: 71°59.0'E

Station 581

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.115	0.005	0.12	39.000
10	0.08	0.03	0.11	
25	0.08	0.02	0.10	
50	0.27	0.085	0.355	
75	0.27	0.13	0.40	
100	0.185	0.175	0.36	
125	0.08	0.08	0.16	
150	0.03	0.04	0.07	
175	0.00	0.04	0.04	
200	0.00	0.03	0.03	

STATION: 582
DATE: 3/15
TIME: 08.8
LATITUDE: 13°37.5'N
LONGITUDE: 72°40.5'E

Station 582

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.07	0.00	0.07	25.800
10	0.09	0.01	0.10	
25	0.10	0.01	0.11	
50	0.22	0.08	0.30	
75	0.19	0.12	0.31	
100	0.075	0.075	0.15	
125	0.015	0.035	0.05	
150	0.005	0.025	0.03	
175	0.005	0.025	0.03	
200	0.00	0.02	0.02	

STATION: 583
DATE: 3/15
TIME: 12.0
LATITUDE: 13°48.0'N
LONGITUDE: 72°57.5'E

Station 583

Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0.105	0.005	0.11	38.050
0.08	0.01	0.09	
0.11	0.02	0.13	
0.36	0.06	0.42	
0.39	0.12	0.51	
0.13	0.085	0.215	
0.045	0.06	0.105	
0.015	0.025	0.04	
0.005	0.025	0.03	
0.01	0.05	0.06	

STATION: 584
DATE: 3/15
TIME: 15.6
LATITUDE: 14°03.5'N
LONGITUDE: 73°17.5'E

Station 584

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.10	0.00	0.10	36.425
10	0.10	0.015	0.115	
25	0.10	0.02	0.12	
50	0.27	0.05	0.32	
75	0.37	0.11	0.48	
100	0.18	0.09	0.27	
125	0.045	0.055	0.10	
150	0.01	0.03	0.04	
175	0.015	0.035	0.05	
200	0.01	0.035	0.045	

STATION: 585
DATE: 3/21
TIME: 07.6
LATITUDE: 20°09.0'N
LONGITUDE: 69°26.0'E

Station 585

Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0.30	0.03	0.33	34.300
0.27	0.05	0.32	
0.30	0.06	0.36	
0.24	0.08	0.32	
0.145	0.045	0.19	
0.06	0.03	0.09	
0.045	0.055	0.10	
0.03	0.03	0.06	
0.015	0.055	0.07	
0.01	0.045	0.055	

STATION: 586
DATE: 3/21
TIME: 16.5
LATITUDE: 20°07.5'N
LONGITUDE: 67°56.0'E

Station 586

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.01	0.11	22.025
10	0.15	0.01	0.16	
25	0.255	0.025	0.28	
50	0.215	0.035	0.25	
75	0.04	0.01	0.05	
100	0.15	0.03	0.18	
125	0.025	0.025	0.05	
150	0.01	0.01	0.02	
175	0.00	0.01	0.01	
200				

STATION: 587
DATE: 3/22
TIME: 04.3
LATITUDE: 20°19.5'N
LONGITUDE: 66°36.5'E

Station 587

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.15	0.01	0.16	17.275
0.125	0.02	0.145	
0.145	0.025	0.17	
0.135	0.025	0.16	
0.10	0.05	0.15	
0.05	0.03	0.08	
0.02	0.02	0.04	
0.01	0.01	0.02	
0.01	0.01	0.02	
0.005	0.015	0.02	

STATION: 588
DATE: 3/23
TIME: 04.7
LATITUDE: 24°57.5'N
LONGITUDE: 60°44.0'E

Station 588

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.37	0.00	0.37	40.375
10	0.41	0.02	0.43	
25	0.40	0.02	0.42	
50	0.585	0.095	0.68	
75	0.10	0.04	0.14	
100	0.06	0.02	0.08	
125	0.03	0.01	0.04	
150	0.01	0.01	0.02	
175	0.01	0.01	0.02	
200	0.005	0.015	0.02	

STATION: 589
DATE: 3/24
TIME: 12.0
LATITUDE: 24°02.0'N
LONGITUDE: 59°57.0'E

Station 589

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.23	0.00	0.23	37.00
0.25	0.02	0.27	
0.595	0.035	0.63	
0.45	0.08	0.53	
0.105	0.035	0.14	
0.025	0.015	0.04	
0.015	0.015	0.03	
0.005	0.015	0.02	
0.005	0.015	0.02	
0.00	0.03	0.03	

STATION: 590
DATE: 3/24
TIME: 22.2
LATITUDE: 23°07.0'N
LONGITUDE: 59°22.5'E

Station 590

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.29	0.01	0.30	71.70
10	0.215	0.005	0.22	
25	0.76	0.03	0.79	
50	0.27	0.085	0.355	
75	0.36	0.11	0.47	
100	0.23	0.06	0.29	
125	0.10	0.07	0.17	
150	0.13	0.08	0.21	
175	0.28	0.09	0.37	
200	0.005	0.165	0.17	

STATION: 591
DATE: 3/25
TIME: 13.0
LATITUDE: 21.00.0'N
LONGITUDE: 59°35.5'E

Station 591

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.85	0.07	0.92	78.25
1.33	0.15	1.48	
1.73	0.07	1.80	
0.10	0.15	0.25	
0.125	0.065	0.19	
0.04	0.07	0.11	
0.04	0.06	0.10	
0.01	0.035	0.045	
0.01	0.04	0.05	
0.005	0.035	0.04	

STATION: 592
DATE: 3/25
TIME: 21.1
LATITUDE: 20°49.0'N
LONGITUDE: 61°01.0'E

Station 592

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.39	0.00	0.39	44.10
10	0.25	0.03	0.28	
25	0.74	0.07	0.81	
50	0.36	0.06	0.42	
75	0.16	0.06	0.22	
100	0.06	0.03	0.09	
125	0.03	0.02	0.05	
150	0.03	0.04	0.07	
175	0.005	0.025	0.03	
200	0.005	0.03	0.035	

STATION: 593
DATE: 3/26
TIME: 06.8
LATITUDE: 20°40.0'N
LONGITUDE: 62°25.0'E

Station 593

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.07	0.00	0.07	13.025
0.06	0.005	0.065	
0.08	0.00	0.08	
0.135	0.025	0.16	
0.08	0.05	0.13	
0.035	0.015	0.05	
0.01	0.01	0.02	
0.005	0.015	0.02	
0.005	0.015	0.02	
0.005	0.015	0.02	

STATION: 594
DATE: 3/26
TIME: 13.7
LATITUDE: 20°33.0'N
LONGITUDE: 63°50.5'E

Station 594

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.25	0.02	0.27	34.275
10	0.23	0.01	0.24	
25	0.54	0.06	0.60	
50	0.25	0.06	0.31	
75	0.08	0.035	0.115	
100	0.065	0.025	0.09	
125	0.01	0.015	0.025	
150	0.005	0.025	0.03	
175	0.01	0.08	0.09	
200	0.01	0.10	0.11	

STATION: 595
DATE: 3/26
TIME: 01.2
LATITUDE: 20°28.0'N
LONGITUDE: 65°14.0'E

Station 595

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.25	0.02	0.27	22.925
10	0.23	0.01	0.24	
25	0.46	0.05	0.51	
50	0.25	0.07	0.32	
75	0.075	0.025	0.10	
100	0.03	0.04	0.07	
125	0.01	0.02	0.03	
150	0.01	0.01	0.02	
175	0.005	0.015	0.02	
200	0.00	0.02	0.02	

STATION: 596
DATE: 3/27
TIME: 00.1
LATITUDE: 18°56.5'N
LONGITUDE: 61°22.5'E

Station 596

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.06	0.00	0.06	19.425
10	0.04	0.00	0.04	
25	0.05	0.00	0.05	
50	0.19	0.03	0.22	
75	0.14	0.07	0.21	
100	0.09	0.03	0.12	
125	0.04	0.03	0.07	
150	0.02	0.02	0.04	
175	0.01	0.01	0.02	
200	0.005	0.045	0.05	

STATION: 597
DATE: 3/28
TIME: 01.7
LATITUDE: 17°26.0'N
LONGITUDE: 57°12.0'E

Station 597

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.15	0.02	0.17	34.800
10	0.12	0.025	0.145	
25	0.12	0.03	0.15	
50	0.62	0.12	0.74	
75	0.145	0.075	0.22	
100	0.04	0.04	0.08	
125	0.02	0.03	0.05	
150	0.00	0.03	0.03	
175	0.00	0.03	0.03	
200	0.00	0.03	0.03	

STATION: 598
DATE: 3/30
TIME: 11.7
LATITUDE: 15°24.0'N
LONGITUDE: 52°27.5'E

Station 598

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.145	0.005	0.15	35.475
10	0.09	0.01	0.10	
25	0.185	0.045	0.23	
50	0.735	0.145	0.88	
75	0.09	0.05	0.14	
100	0.05	0.03	0.08	
125	0.01	0.02	0.03	
150	0.00	0.02	0.02	
175	0.00	0.02	0.02	
200	0.00	0.02	0.02	

STATION: 599
DATE: 3/30
TIME: 19.8
LATITUDE: 15°24.0'N
LONGITUDE: 53°10.0'E

Station 599

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.12	0.01	0.13	46.725
10	0.105	0.01	0.115	
25	0.09	0.01	0.10	
50	0.25	0.05	0.30	
75	0.57	0.26	0.83	
100	0.33	0.14	0.47	
125	0.055	0.025	0.08	
150	0.02	0.02	0.04	
175	0.00	0.03	0.03	
200	0.00	0.03	0.03	

STATION: 600
DATE: 3/31
TIME: 03.8
LATITUDE: 15°15.5'N
LONGITUDE: 54°36.5'E

Station 600

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.04	0.00	0.04	25.700
10	0.09	0.01	0.10	
25	0.135	0.015	0.15	
50	0.20	0.03	0.23	
75	0.27	0.09	0.36	
100	0.10	0.04	0.14	
125	0.035	0.025	0.06	
150	0.01	0.02	0.03	
175	0.00	0.02	0.02	
200	0.00	0.02	0.02	

STATION: 601
DATE: 3/31
TIME: 13.6
LATITUDE: 15°08.5'N
LONGITUDE: 55°55.5'E

Station 601

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.05	0.005	0.055	19.480
10	0.04	0.00	0.04	
25	0.04	0.00	0.04	
50	0.095	0.015	0.11	
75	0.28	0.03	0.31	
100	0.08	0.05	0.13	
125	0.065	0.035	0.10	
150	0.02	0.015	0.035	
175	0.01	0.01	0.02	
200	0.00	0.02	0.02	

STATION: 602
DATE: 3/31
TIME: 21.6
LATITUDE: 14°58.0'N
LONGITUDE: 57°19.5'E

Station 602

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.115	0.005	0.12	31.550
10	0.12	0.01	0.13	
25	0.09	0.02	0.11	
50	0.175	0.045	0.22	
75	0.29	0.08	0.37	
100	0.115	0.095	0.21	
125	0.08	0.04	0.12	
150	0.01	0.06	0.07	
175	0.01	0.04	0.05	
200	0.01	0.08	0.09	

STATION: 603
DATE: 4/1
TIME: 06.6
LATITUDE: 14°47.0'N
LONGITUDE: 58°42.0'E

Station 603

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.105	0.005	0.11	31.300
10	0.10	0.02	0.12	
25	0.075	0.025	0.10	
50	0.55	0.18	0.73	
75	0.145	0.065	0.21	
100	0.035	0.025	0.06	
125	0.02	0.01	0.03	
150	0.01	0.01	0.02	
175	0.00	0.02	0.02	
200	0.015	0.025	0.04	

STATION: 604
DATE: 4/1
TIME: 14.6
LATITUDE: 14°43.0'N
LONGITUDE: 60°11.0'E

Station 604

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.115	0.015	0.13	29.625
10	0.08	0.02	0.10	
25	0.09	0.02	0.11	
50	0.20	0.05	0.25	
75	0.225	0.07	0.295	
100	0.12	0.08	0.20	
125	0.04	0.03	0.07	
150	0.01	0.04	0.05	
175	0.05	0.09	0.14	
200	0.00	0.03	0.03	

STATION: 605
DATE: 4/1
TIME: 23.6
LATITUDE: 14°34.0'N
LONGITUDE: 61°38.0'E

Station 605

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.08	0.01	0.09	26.550
10	0.09	0.01	0.10	
25	0.10	0.03	0.13	
50	0.165	0.05	0.215	
75	0.25	0.16	0.41	
100	0.06	0.08	0.14	
125	0.03	0.03	0.06	
150	0.01	0.06	0.07	
175	0.005	0.045	0.05	
200	0.005	0.045	0.05	

STATION: 606
DATE: 4/2
TIME: 09.6
LATITUDE: 14°25.5'N
LONGITUDE: 63°01.5'E

Station 606

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.09	0.01	0.10	40.15
10	0.055	0.045	0.10	
25	0.105	0.015	0.12	
50	0.16	0.02	0.18	
75	0.66	0.10	0.76	
100	0.195	0.035	0.23	
125	0.045	0.025	0.07	
150	0.005	0.015	0.02	
175	0.035	0.105	0.14	
200	0.005	0.075	0.08	

STATION: 607
DATE: 4/2
TIME: 20.7
LATITUDE: 14°16.5'N
LONGITUDE: 64°24.0'E

Station 607

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.065	0.015	0.08	21.375
10	0.08	0.01	0.09	
25	0.06	0.02	0.08	
50	0.15	0.05	0.20	
75	0.29	0.04	0.33	
100	0.045	0.035	0.08	
125	0.03	0.02	0.05	
150	0.005	0.015	0.02	
175	0.00	0.02	0.02	
200	0.01	0.12	0.13	

STATION: 608
DATE: 4/3
TIME: 05.2
LATITUDE: 14°07.5'N
LONGITUDE: 65°49.0'E

Station 608

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.05	0.01	0.06	34.750
10	0.06	0.00	0.06	
25	0.06	0.00	0.06	
50	0.10	0.02	0.12	
75	0.155	0.025	0.18	
100	0.24	0.11	0.35	
125	0.07	0.03	0.10	
150	0.00	0.30	0.30	
175	0.00	0.12	0.12	
200	0.00	0.03	0.03	

STATION: 609
DATE: 4/3
TIME: 15.4
LATITUDE: 14°02.5'N
LONGITUDE: 67°13.5'E

Station 609

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.09	0.01	0.10	39.500
10	0.10	0.015	0.115	
25	0.08	0.01	0.09	
50	0.145	0.015	0.16	
75	0.105	0.145	0.25	
100	0.47	0.12	0.59	
125	0.015	0.095	0.11	
150	0.03	0.13	0.16	
175	0.01	0.11	0.12	
200	0.00	0.08	0.08	

STATION: 610
DATE: 4/3
TIME: 00.9
LATITUDE: 14°00.0'N
LONGITUDE: 68°38.5'N

Station 610

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.09	0.01	0.10	34.575
10	0.07	0.00	0.07	
25	0.075	0.015	0.09	
50	0.18	0.04	0.22	
75	0.51	0.20	0.71	
100	0.09	0.065	0.155	
125	0.01	0.03	0.04	
150	0.005	0.085	0.09	
175	0.00	0.03	0.03	
200	0.00	0.02	0.02	

STATION: 611
DATE: 4/4
TIME: 10.6
LATITUDE: 14°03.5'N
LONGITUDE: 69°57.0'E

Station 611

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.22	0.02	0.24	47.050
10	0.15	0.02	0.17	
25	0.205	0.025	0.23	
50	0.585	0.155	0.74	
75	0.10	0.09	0.19	
100	0.135	0.135	0.27	
125	0.055	0.065	0.12	
150	0.03	0.04	0.07	
175	0.10	0.04	0.14	
200	0.04	0.04	0.08	

STATION: 612
DATE: 4/4
TIME: 22.6
LATITUDE: 13°35.0'N
LONGITUDE: 71°33.5'E

Station 612

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.09	0.00	0.09	22.595
10	0.095	0.005	0.10	
25	0.105	0.01	0.115	
50	0.19	0.035	0.225	
75	0.225	0.085	0.31	
100	0.05	0.02	0.07	
125	0.03	0.03	0.06	
150	0.01	0.02	0.03	
175	0.01	0.03	0.04	
200	0.00	0.015	0.015	

STATION: 613
DATE: 4/5
TIME: 21.3
LATITUDE: 09°58.0'N
LONGITUDE: 72°50.5'E

Station 613

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.04	0.01	0.05	33.850
10	0.025	0.005	0.03	
25	0.045	0.005	0.05	
50	0.045	0.01	0.055	
75	0.37	0.11	0.48	
100	0.27	0.11	0.38	
125	0.115	0.095	0.21	
150	0.04	0.05	0.09	
175	0.025	0.035	0.06	
200	0.00	0.025	0.025	

STATION: 614
DATE: 4/6
TIME: 06.6
LATITUDE: 09°57.0'N
LONGITUDE: 74°11.0'E

Station 614

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.15	0.02	0.17	38.450
10	0.15	0.03	0.18	
25	0.095	0.015	0.11	
50	0.12	0.03	0.15	
75	0.525	0.065	0.59	
100	0.25	0.13	0.38	
125	0.06	0.06	0.12	
150	0.015	0.03	0.045	
175	0.01	0.02	0.03	
200	0.00	0.02	0.02	

STATION: 615
DATE: 4/6
TIME: 16.8
LATITUDE: 09°52.0'N
LONGITUDE: 75°19.0'E

Station 615

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
	0.16	0.02	0.18	34.825
	0.13	0.02	0.15	
	0.20	0.04	0.24	
	0.27	0.07	0.34	
	0.27	0.25	0.52	
	0.045	0.055	0.10	
	0.02	0.04	0.06	
	0.01	0.02	0.03	
	0.005	0.025	0.03	
	0.00	0.02	0.02	

STATION: 616
DATE: 4/6
TIME: 00.2
LATITUDE: 08°57.5'N
LONGITUDE: 74°43.0'E

Station 616

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.09	0.00	0.09	40.300
10	0.08	0.00	0.08	
25	0.075	0.005	0.08	
50	0.10	0.01	0.11	
75	0.71	0.20	0.91	
100	0.215	0.105	0.32	
125	0.035	0.035	0.07	
150	0.02	0.03	0.05	
175	0.005	0.015	0.02	
200	0.00	0.02	0.02	

STATION: 617
DATE: 4/7
TIME: 07.9
LATITUDE: 07°58.5'N
LONGITUDE: 74°09.0'E

Station 617

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
	0.11	0.00	0.11	29.20
	0.045	0.015	0.06	
	0.08	0.02	0.10	
	0.105	0.005	0.11	
	0.31	0.09	0.40	
	0.175	0.125	0.30	
	0.07	0.07	0.14	
	0.015	0.03	0.045	
	0.01	0.02	0.03	
	0.00	0.02	0.02	

STATION: 618
DATE: 4/7
TIME: 16.6
LATITUDE: 07°01.5'N
LONGITUDE: 73°24.0'E

Station 618

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.01	0.11	32.150
10	0.11	0.01	0.12	
25	0.07	0.01	0.08	
50	0.095	0.025	0.12	
75	0.44	0.18	0.62	
100	0.08	0.14	0.22	
125	0.03	0.06	0.09	
150	0.02	0.04	0.06	
175	0.00	0.02	0.02	
200	0.00	0.02	0.02	

STATION: 619
DATE: 4/7
TIME: 03.7
LATITUDE: 06°53.0'N
LONGITUDE: 75°05.0'E

Station 619

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.05	0.00	0.05	21.725
10	0.03	0.00	0.03	
25	0.05	0.01	0.06	
50	0.07	0.00	0.07	
75	0.12	0.04	0.16	
100	0.23	0.14	0.37	
125	0.105	0.04	0.145	
150	0.01	0.02	0.03	
175	0.005	0.015	0.02	
200	0.00	0.01	0.01	

STATION: 620
DATE: 4/8
TIME: 15.1
LATITUDE: 06°56.0'N
LONGITUDE: 76°46.5'E

Station 620

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.125	0.015	0.14	30.500
10	0.08	0.04	0.12	
25	0.12	0.02	0.14	
50	0.115	0.025	0.14	
75	0.115	0.085	0.20	
100	0.32	0.22	0.54	
125	0.02	0.05	0.07	
150	0.00	0.03	0.03	
175	0.00	0.03	0.03	
200	0.00	0.02	0.02	

STATION: 621
DATE: 4/13
TIME: 08.0
LATITUDE: 05°39.5'N
LONGITUDE: 79°45.5'E

Station 621

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.14	0.005	0.145	40.35
10	0.135	0.015	0.15	
25	0.13	0.02	0.15	
50	0.15	0.03	0.18	
75	0.38	0.19	0.57	
100	0.155	0.175	0.33	
125	0.10	0.07	0.17	
150	0.075	0.025	0.10	
175	0.04	0.04	0.08	
200	0.06	0.04	0.10	

STATION: 622
DATE: 4/13
TIME: 16.0
LATITUDE: 05°34.0'N
LONGITUDE: 78°36.0'E

Station 622

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.07	0.01	0.08	31.28
10	0.07	0.01	0.08	
25	0.08	0.02	0.10	
50	0.18	0.05	0.23	
75	0.26	0.20	0.46	
100	0.09	0.095	0.185	
125	0.03	0.03	0.06	
150	0.05	0.04	0.09	
175	--	--	--	
200	0.01	0.03	0.04	

STATION: 623
DATE: 4/13
TIME: 0.00
LATITUDE: 05°28.0'N
LONGITUDE: 77°19.0'E

Station 623

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.07	0.03	0.10	33.025
10	0.10	0.03	0.13	
25	0.10	0.02	0.12	
50	0.16	0.05	0.21	
75	0.31	0.16	0.47	
100	0.135	0.125	0.26	
125	0.05	0.05	0.10	
150	0.02	0.03	0.05	
175	0.005	0.025	0.03	
200	0.01	0.02	0.03	

STATION: 624
DATE: 4/14
TIME: (04.3)
LATITUDE: 05°19.5'N
LONGITUDE: 76°05.0'E

Station 624

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.13	0.02	0.15	34.625
10	0.14	0.02	0.16	
25	0.13	0.02	0.15	
50	0.175	0.035	0.21	
75	0.30	0.13	0.43	
100	0.175	0.115	0.29	
125	0.06	0.05	0.11	
150	0.03	0.04	0.07	
175	0.01	0.02	0.03	
200	0.01	0.02	0.03	

STATION: 625
DATE: 4/14
TIME: 16.5
LATITUDE: 05°05.0'N
LONGITUDE: 74°41.5'E

Station 625

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.105	0.015	0.12	31.275
10	0.075	0.025	0.10	
25	0.105	0.035	0.14	
50	0.13	0.09	0.22	
75	0.145	0.165	0.31	
100	0.205	0.185	0.39	
125	0.03	0.035	0.065	
150	0.01	0.02	0.03	
175	0.01	0.025	0.035	
200	0.01	0.02	0.03	

STATION: 626
DATE: 4/14
TIME: 23.0
LATITUDE: 05°02.5'N
LONGITUDE: 73°48.0'E

Station 626

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.04	0.14	40.30
10	0.095	0.025	0.12	
25	0.13	0.03	0.16	
50	0.15	0.03	0.18	
75	0.47	0.22	0.69	
100	0.135	0.185	0.32	
125	0.05	0.065	0.115	
150	0.01	0.03	0.04	
175	0.005	0.025	0.03	
200	0.015	0.03	0.045	

STATION: 627
DATE: 4/14
TIME: (23.4)
LATITUDE: 05°00.0'N
LONGITUDE: 73°11.5'E

Station 627

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
Did not take samples			

STATION: 628
DATE: 4/15
TIME: 07.5
LATITUDE: 04°59.0'N
LONGITUDE: 72°37.5'E

Station 628

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.15	0.00	0.15	46.735
10	0.105	0.015	0.12	
25	0.17	0.02	0.19	
50	0.19	0.015	0.205	
75	0.36	0.135	0.495	
100	0.125	0.12	0.245	
125	0.10	0.06	0.16	
150	0.245	0.185	0.43	
175	0.03	0.04	0.07	
200	0.015	0.03	0.045	

STATION: 629
DATE: 4/15
TIME: 16.5
LATITUDE: 04°59.0'N
LONGITUDE: 71°14.0'E

Station 629

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.075	0.02	0.095	38.205
0.075	0.025	0.10	
0.06	0.02	0.08	
0.185	0.025	0.21	
0.505	0.135	0.64	
0.205	0.015	0.22	
0.08	0.10	0.18	
0.02	0.035	0.055	
0.025	0.045	0.07	
0.01	0.03	0.04	

STATION: 630
DATE: 4/15
TIME: 02.0
LATITUDE: 05°03.0'N
LONGITUDE: 69°50.0'E

Station 630

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.045	0.015	0.06	34.70
10	0.05	0.02	0.07	
25	0.055	0.015	0.07	
50	0.175	0.045	0.22	
75	0.34	0.19	0.53	
100	0.215	0.165	0.38	
125	0.08	0.085	0.165	
150	0.015	0.03	0.045	
175	0.01	0.02	0.03	
200	0.01	0.02	0.03	

STATION: 631
DATE: 4/16
TIME: 10.0
LATITUDE: 05°07.0'N
LONGITUDE: 68°30.5'E

Station 631

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.05	0.02	0.07	35.82
10	0.05	0.02	0.07	
25	0.095	0.01	0.105	
50	0.11	0.025	0.135	
75	0.33	0.13	0.46	
100	0.175	0.195	0.37	
125	0.10	0.11	0.21	
150	0.02	0.04	0.06	
175	0.02	0.025	0.045	
200	0.015	0.025	0.04	

STATION: 632
DATE: 4/16
TIME: 17.5
LATITUDE: 05°02.5'N
LONGITUDE: 67°12.0'E

Station 632

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.055	0.005	0.06	32.025
10	0.045	0.015	0.06	
25	0.07	0.01	0.08	
50	0.09	0.015	0.105	
75	0.115	0.065	0.18	
100	0.33	0.17	0.50	
125	0.135	0.145	0.28	
150	0.03	0.03	0.06	
175	0.01	0.03	0.04	
200	0.01	0.02	0.03	

STATION: 633
DATE: 4/17
TIME: 01.5
LATITUDE: 04°59.5'N
LONGITUDE: 65°44.0'E

Station 633

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.055	0.015	0.07	35.50
10	0.07	0.02	0.09	
25	0.10	0.02	0.12	
50	0.19	0.07	0.26	
75	0.175	0.145	0.32	
100	0.165	0.135	0.30	
125	0.10	0.10	0.20	
150	0.04	0.05	0.09	
175	0.03	0.05	0.08	
200	0.01	0.02	0.03	

STATION: 634
DATE: 4/17
TIME: 12.5
LATITUDE: 05°11.0'N
LONGITUDE: 64°31.0'E

Station 634

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.075	0.025	0.10	38.925
10	0.09	0.03	0.12	
25	0.115	0.025	0.14	
50	0.19	0.05	0.24	
75	0.32	0.13	0.45	
100	0.155	0.175	0.33	
125	0.07	0.09	0.16	
150	0.04	0.05	0.09	
175	0.04	0.04	0.08	
200	0.01	0.02	0.03	

STATION: 635
DATE: 4/17
TIME: 21.5
LATITUDE: 05°01.5'N
LONGITUDE: 63°07.5'E

Station 635

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.09	0.03	0.12	25.025
0.09	0.03	0.12	
0.11	0.03	0.14	
0.15	0.03	0.18	
0.10	0.04	0.14	
0.195	0.115	0.31	
0.055	0.035	0.09	
0.015	0.025	0.04	
0.01	0.02	0.03	
0.01	0.02	0.03	

STATION: 636
DATE: 4/18
TIME: 06.0
LATITUDE: 05°02.5'N
LONGITUDE: 61°49.5'E

Station 636

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.05	0.01	0.06	17.00
10	0.05	0.01	0.06	
25	0.05	0.01	0.06	
50	0.07	0.01	0.08	
75	0.135	0.065	0.20	
100	0.08	0.07	0.15	
125	0.04	0.04	0.08	
150	0.02	0.03	0.05	
175	0.01	0.01	0.02	
200	0.005	0.015	0.02	

STATION: 637
DATE: 4/18
TIME: 15.0
LATITUDE: 05°03.5'N
LONGITUDE: 60°28.5'E

Station 637

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.06	0.01	0.07	40.45
0.09	0.03	0.12	
0.105	0.025	0.13	
0.15	0.03	0.18	
0.36	0.12	0.48	
0.215	0.205	0.42	
0.10	0.13	0.23	
0.03	0.04	0.07	
0.015	0.035	0.05	
0.005	0.015	0.02	

STATION: 638
DATE: 4/18
TIME: 00.0
LATITUDE: 05°03.0'N
LONGITUDE: 58°57.0'E

Station 638

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.05	0.03	0.08	36.68
10	0.045	0.015	0.06	
25	0.045	0.025	0.07	
50	0.09	0.03	0.12	
75	0.29	0.21	0.50	
100	0.24	0.17	0.41	
125	0.10	0.13	0.23	
150	0.02	0.03	0.05	
175	0.015	0.025	0.04	
200	0.005	0.025	0.03	

STATION: 639
DATE: 4/19
TIME: 08.0
LATITUDE: 05°02.0'N
LONGITUDE: 57°41.0'E

Station 639

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.055	0.005	0.06	30.35
10	0.055	0.025	0.08	
25	0.08	0.01	0.09	
50	0.11	0.02	0.13	
75	0.185	0.055	0.24	
100	0.25	0.12	0.37	
125	0.125	0.095	0.22	
150	0.04	0.04	0.08	
175	0.02	0.02	0.04	
200	0.01	0.01	0.02	

STATION: 640
DATE: 4/19
TIME: 18.2
LATITUDE: 05°01.5'N
LONGITUDE: 56°20.0'E

Station 640

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.03	0.01	0.04	21.25
10	0.025	0.005	0.03	
25	0.03	0.01	0.04	
50	0.065	0.005	0.07	
75	0.13	0.05	0.18	
100	0.16	0.14	0.30	
125	0.08	0.06	0.14	
150	0.02	0.03	0.05	
175	0.02	0.02	0.04	
200	0.015	0.015	0.03	

STATION: 641
DATE: 4/19
TIME: 02.5
LATITUDE: 05°00.0'N
LONGITUDE: 54°50.5'E

Station 641

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.05	0.01	0.06	40.675
10	0.055	0.01	0.065	
25	0.07	0.01	0.08	
50	0.105	0.03	0.135	
75	0.40	0.13	0.53	
100	0.225	0.155	0.38	
125	0.175	0.085	0.26	
150	0.05	0.05	0.10	
175	0.035	0.025	0.06	
200	0.015	0.025	0.04	

STATION: 642
DATE: 4/20
TIME: 10.2
LATITUDE: 05°00.0'N
LONGITUDE: 53°38.0'E

Station 642

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.06	0.01	0.07	31.80
10	0.07	0.02	0.09	
25	0.09	0.02	0.11	
50	0.105	0.025	0.13	
75	0.165	0.175	0.34	
100	0.195	0.135	0.33	
125	0.07	0.11	0.18	
150	0.04	0.05	0.09	
175	0.015	0.025	0.04	
200	0.005	0.025	0.03	

STATION: 643
DATE: 4/20
TIME: 18.0
LATITUDE: 05°02.0'N
LONGITUDE: 52°12.5'E

Station 643

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.04	0.01	0.05	34.55
0.06	0.01	0.07	
0.075	0.015	0.09	
0.12	0.03	0.15	
0.175	0.215	0.39	
0.115	0.155	0.27	
0.02	0.20	0.22	
0.045	0.075	0.12	
0.04	0.05	0.09	
0.02	0.03	0.05	

STATION: 644
DATE: 4/21
TIME: (00.6)
LATITUDE: 05°02.0'N
LONGITUDE: 50°58.0'E

Station 644

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 645
DATE: 4/21
TIME: 07.3
LATITUDE: 05°04.0'N
LONGITUDE: 50°30.0'E

Station 645

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.05	0.00	0.05	29.13
0.05	0.01	0.06	
0.04	0.01	0.05	
0.08	0.02	0.10	
0.235	0.05	0.285	
0.17	0.12	0.29	
0.10	0.09	0.19	
0.07	0.05	0.12	
0.04	0.025	0.065	
0.04	0.03	0.07	

STATION: 646
DATE: 4/21
TIME: (10.9)
LATITUDE: 05°04.0'N
LONGITUDE: 50°00.0'E

Station 646

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 647
DATE: 4/21
TIME: 17.7
LATITUDE: 05°02.0'N
LONGITUDE: 49°41.0'E

Station 647

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.065	0.015	0.08	23.225
10	0.10	0.00	0.10	
25	0.08	0.03	0.11	
50	0.085	0.015	0.10	
75	0.105	0.035	0.14	
100	0.165	0.105	0.27	
125	0.05	0.06	0.11	
150	0.04	0.05	0.09	
175	0.02	0.03	0.05	
200	0.01	0.02	0.03	

STATION: 648
DATE: 4/21
TIME: 23.5
LATITUDE: 05°05.0'N
LONGITUDE: 48°57.0'E

Station 648

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.075	0.075	0.15	24.90
10	0.05	0.04	0.09	
25	0.045	0.025	0.07	
50	0.085	0.025	0.11	
75	0.15	0.08	0.23	
100	0.19	0.18	0.37	
125	0.045	0.035	0.08	
150	0.01	0.02	0.03	
175	0.01	0.02	0.03	
200	0.00	0.02	0.02	

STATION: 649
DATE: 4/22
TIME: 07.7
LATITUDE: 04°03.0'N
LONGITUDE: 48°27.0'E

Station 649

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.08	0.02	0.10	23.725
10	0.06	0.02	0.08	
25	0.06	0.02	0.08	
50	0.095	0.015	0.11	
75	0.105	0.025	0.13	
100	0.12	0.02	0.14	
125	0.20	0.11	0.31	
150	0.05	0.04	0.09	
175	0.02	0.02	0.04	
200	0.005	0.015	0.02	

STATION: 650
DATE: 4/22
TIME: 16.5
LATITUDE: 03°00.0'N
LONGITUDE: 49°11.0'E

Station 650

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.04	0.02	0.06	35.850
10	0.05	0.02	0.07	
25	0.06	0.01	0.07	
50	0.07	0.02	0.09	
75	--	--	--	
100	0.30	0.24	0.54	
125	0.09	0.105	0.195	
150	0.065	0.05	0.115	
175	0.02	0.03	0.05	
200	0.025	0.025	0.05	

STATION: 651
DATE: 4/23
TIME: 02.5
LATITUDE: 01°56.5'N
LONGITUDE: 49°42.5'E

Station 651

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.05	0.02	0.07	31.385
10	0.045	0.02	0.065	
25	0.065	0.015	0.08	
50	0.09	0.03	0.12	
75	0.12	0.09	0.21	
100	0.225	0.175	0.40	
125	0.135	0.135	0.27	
150	0.04	0.05	0.09	
175	0.015	0.025	0.04	
200	0.01	0.02	0.03	

STATION: 652
DATE: 4/23
TIME: 07.3
LATITUDE: 01°33.0'N
LONGITUDE: 50°07.0'E

Station 652

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.065	0.005	0.07	21.00
10	0.05	0.00	0.05	
25	0.06	0.01	0.07	
50	0.10	0.01	0.11	
75	0.175	0.055	0.23	
100	0.10	0.02	0.12	
125	0.10	0.02	0.12	
150	0.045	0.04	0.085	
175	0.04	0.03	0.07	
200	0.005	0.015	0.02	

STATION: 653
DATE: 4/23
TIME: (10.6)
LATITUDE: 00°58.0'N
LONGITUDE: 50°28.0'E

Station 653

Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2

Did not take samples.

STATION: 654
DATE: 4/23
TIME: (14.9)
LATITUDE: 00°34.0'N
LONGITUDE: 50°48.0'E

Station 654

Depth	Chl a mg/m^3	Phaeo mg/m3	Total Pigment mg/m3	mg/m^2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 655
DATE: 4/23
TIME: (21.2)
LATITUDE: 00°00.0'N
LONGITUDE: 51°10.0'E

Station 655

Chl a mg/m^3	Phaeo mg/m3	Total Pigment mg/m3	mg/m^2
Did not take samples.			

STATION: 656
DATE: 4/24
TIME: 22.0
LATITUDE: 00°27.0'S
LONGITUDE: 51°29.0'E

Station 656

Depth	Chl a mg/m^3	Phaeo mg/m3	Total Pigment mg/m3	mg/m^2
0	0.045	0.005	0.05	33.475
10	0.05	0.01	0.06	
25	0.07	0.01	0.08	
50	0.14	0.03	0.17	
75	0.30	0.20	0.50	
100	0.175	0.095	0.27	
125	0.10	0.04	0.14	
150	0.065	0.035	0.10	
175	0.015	0.025	0.04	
200	0.005	0.025	0.03	

STATION: 657
DATE: 4/24
TIME: (07.0)
LATITUDE: 00°59.0'S
LONGITUDE: 51°48.0'E

Station 657

Chl a mg/m^3	Phaeo mg/m3	Total Pigment mg/m3	mg/m^2
Did not take samples.			

STATION: 658
DATE: 4/24
TIME: (12.2)
LATITUDE: 01°28.0'S
LONGITUDE: 52°06.5'E

Station 658

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.09	0.03	0.12	39.65
10	0.07	0.02	0.09	
25	0.10	0.03	0.13	
50	0.13	0.04	0.17	
75	0.25	0.28	0.53	
100	0.30	0.11	0.41	
125	0.08	0.09	0.17	
150	0.03	0.025	0.055	
175	0.045	0.005	0.05	
200	0.005	0.03	0.035	

STATION: 659
DATE: 4/24
TIME: 11.2
LATITUDE: 02°03.5'S
LONGITUDE: 52°30.0'E

Station 659

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.095	0.025	0.12	43.625
10	0.10	0.02	0.12	
25	0.135	0.035	0.17	
50	0.17	0.01	0.18	
75	0.28	0.14	0.42	
100	0.41	0.11	0.52	
125	0.18	0.055	0.235	
150	0.055	0.045	0.10	
175	0.015	0.035	0.05	
200	0.005	0.035	0.04	

STATION: 660
DATE: 4/25
TIME: 03.1
LATITUDE: 03°08.0'S
LONGITUDE: 52°57.0'E

Station 660

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.05	0.01	0.06	33.00
10	0.05	0.02	0.07	
25	0.095	0.025	0.12	
50	0.145	0.035	0.18	
75	0.33	0.15	0.48	
100	--	--	--	
125	0.045	0.035	0.08	
150	0.06	0.045	0.105	
175	0.01	0.025	0.035	
200	0.005	0.035	0.04	

STATION: 661
DATE: 4/25
TIME: 13.0
LATITUDE: 04°05.0'S
LONGITUDE: 53°26.0'E

Station 661

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.085	0.005	0.09	35.35
10	0.08	0.01	0.09	
25	0.11	0.02	0.13	
50	0.45	0.08	0.53	
75	0.27	0.07	0.34	
100	0.145	0.035	0.18	
125	0.055	0.035	0.09	
150	0.025	0.03	0.055	
175	0.015	0.025	0.04	
200	0.01	0.015	0.025	

STATION: 662
DATE: 4/25
TIME: (18.3)
LATITUDE: 04°04.0'S
LONGITUDE: 52°06.0'E

Station 662

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.03	0.01	0.04	12.25
10	0.035	0.005	0.04	
25	0.04	0.00	0.04	
50	0.06	0.02	0.08	
75	0.145	0.075	0.22	
100	0.04	0.03	0.07	
125	0.01	0.02	0.03	
150	0.01	0.005	0.015	
175	0.005	0.005	0.01	
200	0.005	0.005	0.01	

STATION: 663
DATE: 4/26
TIME: 06.0
LATITUDE: 03°56.5'S
LONGITUDE: 50°47.0'E

Station 663

Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0.06	0.01	0.07	30.05
0.05	0.01	0.06	
0.055	0.015	0.07	
0.075	0.025	0.10	
0.31	0.18	0.49	
0.155	0.195	0.35	
0.035	0.055	0.09	
0.01	0.015	0.025	
0.01	0.03	0.04	
0.01	0.005	0.015	

STATION: 664
DATE: 4/26
TIME: 14.0
LATITUDE: 03°58.0'S
LONGITUDE: 49°24.0'E

Station 664

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.10	0.01	0.11	19.05
10	0.105	0.015	0.12	
25	0.135	0.015	0.15	
50	0.24	0.05	0.29	
75	0.075	0.055	0.13	
100	0.01	0.02	0.03	
125	0.01	0.01	0.02	
150	0.04	0.02	0.06	
175	0.01	0.01	0.02	
200	0.01	0.01	0.02	

STATION: 665
DATE: 4/26
TIME: 00.5
LATITUDE: 03°52.0'S
LONGITUDE: 48°03.0'E

Station 665

Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0.08	0.02	0.10	31.075
0.055	0.015	0.07	
0.08	0.03	0.11	
0.11	0.04	0.15	
0.42	0.21	0.63	
0.10	0.11	0.21	
0.02	0.04	0.06	
0.005	0.015	0.02	
0.005	0.015	0.02	
0.005	0.015	0.02	

STATION: 666
DATE: 4/27
TIME: 09.0
LATITUDE: 03°52.0'S
LONGITUDE: 46°37.0'E

Station 666

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.04	0.02	0.06	43.075
10	0.045	0.025	0.07	
25	0.10	0.02	0.12	
50	0.31	0.045	0.355	
75	0.35	0.14	0.49	
100	0.20	0.095	0.295	
125	0.125	0.145	0.27	
150	0.07	0.06	0.13	
175	0.01	0.02	0.03	
200	0.005	0.015	0.02	

STATION: 667
DATE: 4/27
TIME: 13.5
LATITUDE: 03°57.0'S
LONGITUDE: 45°13.0'E

Station 667

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.045	0.005	0.05	42.75
10	0.045	0.01	0.055	
25	0.05	0.01	0.06	
50	0.235	0.085	0.32	
75	0.36	0.14	0.50	
100	0.185	0.105	0.29	
125	0.03	0.035	0.065	
150	0.08	0.12	0.20	
175	0.04	0.13	0.17	
200	0.04	0.13	0.17	

STATION: 668
DATE: 4/28
TIME: 18.0
LATITUDE: 04°08.0'S
LONGITUDE: 43°54.0'E

Station 668

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.08	0.03	0.11	46.950
10	0.065	0.015	0.08	
25	0.10	0.03	0.13	
50	0.42	0.11	0.53	
75	0.41	0.13	0.54	
100	0.155	0.105	0.26	
125	0.105	0.09	0.195	
150	0.155	0.115	0.27	
175	0.025	0.04	0.065	
200	0.01	0.03	0.04	

STATION: 669
DATE: 4/28
TIME: 20.2
LATITUDE: 04°07.0'S
LONGITUDE: 42°30.0'E

Station 669

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.06	0.01	0.07	32.625
10	0.05	0.02	0.07	
25	0.075	0.025	0.10	
50	0.095	0.025	0.12	
75	0.27	0.11	0.38	
100	0.135	0.145	0.28	
125	0.10	0.045	0.145	
150	0.03	0.04	0.07	
175	--	--	--	
200	0.035	0.035	0.07	

STATION: 670
DATE: 4/28
TIME: 20.5
LATITUDE: 03°56.0'S
LONGITUDE: 41°22.0'E

Station 670

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.04	0.015	0.055	44.13
10	0.06	0.02	0.08	
25	0.06	0.03	0.09	
50	0.215	0.085	0.30	
75	0.28	0.20	0.48	
100	0.25	0.18	0.43	
125	0.135	0.125	0.26	
150	0.06	0.06	0.12	
175	0.015	0.025	0.04	
200	0.005	0.02	0.025	

STATION: 671
DATE: 4/29
TIME: 03.0
LATITUDE: 03°49.0'S
LONGITUDE: 40°41.0'E

Station 671

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.055	0.015	0.07	34.70
10	0.07	0.02	0.09	
25	0.05	0.02	0.07	
50	0.14	0.05	0.19	
75	0.135	0.085	0.22	
100	0.195	0.16	0.355	
125	0.145	0.125	0.27	
150	0.07	0.06	0.13	
175	0.05	0.04	0.09	
200	0.015	0.02	0.035	

STATION: 672
DATE: 4/29
TIME: (04.4)
LATITUDE: 03°46.0'S
LONGITUDE: 40°10.0'E

Station 672

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 673
DATE: 5/5
TIME: 22.5
LATITUDE: 10°43.0'S
LONGITUDE: 40°53.5'E

Station 673

Depth	Chl a mg/m³	Phaeo mg/m³	Total mg/m³	Pigment mg/m²
0	0.075	0.025	0.10	51.85
10	0.08	0.02	0.10	
25	0.06	0.02	0.08	
50	0.105	0.035	0.14	
75	0.205	0.055	0.26	
100	0.46	0.03	0.49	
125	0.27	0.16	0.43	
150	0.24	0.12	0.36	
175	0.10	0.075	0.175	
200	0.07	0.06	0.13	

STATION: 674
DATE: 5/6
TIME: 09.5
LATITUDE: 11°14.0'S
LONGITUDE: 41°57.8'E

Station 674

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.065	0.015	0.08	36.65
10	0.11	0.02	0.13	
25	0.09	0.01	0.10	
50	0.11	0.03	0.14	
75	0.27	0.10	0.37	
100	0.205	0.125	0.33	
125	0.105	0.105	0.21	
150	0.065	0.045	0.11	
175	0.025	0.035	0.06	
200	0.01	0.16	0.17	

STATION: 675
DATE: 5/6
TIME: 16.4
LATITUDE: 11°39.2'S
LONGITUDE: 43°07.5'E

Station 675

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.10	0.04	0.14	47.35
10	0.105	0.045	0.15	
25	0.08	0.04	0.12	
50	0.125	0.055	0.18	
75	0.39	0.17	0.56	
100	0.27	0.22	0.49	
125	0.09	0.12	0.21	
150	0.06	0.08	0.14	
175	0.04	0.05	0.09	
200	0.02	0.03	0.05	

STATION: 676
DATE: 5/6
TIME: (21.0)
LATITUDE: 12°03.5'S
LONGITUDE: 43°39.0'E

Station 676

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 677
DATE: 5/8
TIME: 04.0
LATITUDE: 12°34.0'S
LONGITUDE: 44°24.8'E

Station 677

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.195	0.025	0.22	42.545
10	0.10	0.03	0.13	
25	0.095	0.02	0.115	
50	0.145	0.03	0.175	
75	0.46	0.10	0.56	
100	0.225	0.085	0.31	
125	0.115	0.075	0.19	
150	0.03	0.10	0.13	
175	0.10	0.01	0.11	
200	0.025	0.025	0.05	

STATION: 678
DATE: 5/8
TIME: 15.2
LATITUDE: 13°11.0'S
LONGITUDE: 45°32.8'E

Station 678

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.15	0.04	0.19	62.475
10	0.215	0.025	0.24	
25	0.185	0.035	0.22	
50	0.27	0.03	0.30	
75	0.88	0.10	0.98	
100	0.26	0.17	0.43	
125	0.185	0.075	0.26	
150	0.11	0.02	0.13	
175	0.02	0.03	0.05	
200	0.015	0.015	0.03	

STATION: 679
DATE: 5/8
TIME: 20.0
LATITUDE: 13°20.0'S
LONGITUDE: 46°33.5'E

Station 679

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.065	0.00	0.065	40.50
10	0.065	0.005	0.07	
25	0.055	0.01	0.065	
50	0.38	0.11	0.49	
75	0.32	0.17	0.49	
100	0.095	0.075	0.17	
125	0.06	0.04	0.10	
150	0.065	0.095	0.16	
175	0.03	0.03	0.06	
200	0.015	0.02	0.035	

STATION: 680
DATE: 5/9
TIME: 06.2
LATITUDE: 13°34.5'S
LONGITUDE: 47°36.0'E

Station 680

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.13	0.02	0.15	24.875
10	0.03	0.10	0.13	
25	0.105	0.025	0.13	
50	0.105	0.035	0.14	
75	0.205	0.065	0.27	
100	--	--	--	
125	0.055	0.055	0.11	
150	0.015	0.025	0.04	
175	0.01	0.03	0.04	
200	0.005	0.015	0.02	

STATION: 681
DATE: 5/11
TIME: 18.7
LATITUDE: 11°48.0'S
LONGITUDE: 49°40.0'E

Station 681

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.05	0.02	0.07	33.95
10	0.065	0.015	0.08	
25	0.08	0.03	0.11	
50	0.08	0.03	0.11	
75	0.155	0.065	0.22	
100	0.24	0.155	0.395	
125	0.11	0.085	0.195	
150	0.025	0.035	0.06	
175	0.005	0.015	0.02	
200	0.01	0.02	0.03	

STATION: 682
DATE: 5/12
TIME: 04.5
LATITUDE: 11°05.0'S
LONGITUDE: 50°15.5'E

Station 682

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.12	0.06	0.18	48.525
10	0.195	0.045	0.24	
25	0.135	0.065	0.20	
50	0.26	0.17	0.43	
75	0.225	0.175	0.40	
100	0.175	0.135	0.31	
125	0.115	0.105	0.22	
150	0.115	0.085	0.20	
175	0.02	0.03	0.05	
200	0.01	0.02	0.03	

STATION: 683
DATE: 5/12
TIME: 13.5
LATITUDE: 10°27.0'S
LONGITUDE: 51°01.0'E

Station 683

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.165	0.045	0.21	68.930
0.205	0.065	0.27	
0.28	0.175	0.455	
0.36	0.24	0.60	
0.545	0.035	0.58	
0.32	0.18	0.50	
0.135	0.105	0.24	
0.08	0.09	0.17	
0.055	0.045	0.10	
0.02	0.03	0.05	

STATION: 684
DATE: 5/12
TIME: 18.5
LATITUDE: 10°02.5'S
LONGITUDE: 51°23.0'E

Station 684

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.155	0.055	0.21	54.175
10	0.165	0.055	0.22	
25	0.155	0.055	0.21	
50	0.255	0.175	0.43	
75	0.27	0.21	0.48	
100	--	--	--	
125	0.145	0.135	0.28	
150	0.08	0.075	0.155	
175	0.05	0.04	0.09	
200	0.025	0.04	0.065	

STATION: 685
DATE: 5/13
TIME: 06.0
LATITUDE: 10°03.0'S
LONGITUDE: 52°52.0'E

Station 685

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.155	0.055	0.21	45.875
0.215	0.065	0.28	
0.195	0.065	0.26	
0.24	0.14	0.38	
0.24	0.18	0.42	
0.105	0.125	0.23	
0.105	0.095	0.20	
0.05	0.07	0.12	
0.03	0.04	0.07	
0.02	0.03	0.05	

STATION: 686
DATE: 5/13
TIME: 16.0
LATITUDE: 10°01.5'S
LONGITUDE: 54°07.0'E

Station 686

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.31	0.10	0.41	78.30
10	0.33	0.10	0.43	
25	0.39	0.11	0.50	
50	0.51	0.28	0.79	
75	0.51	0.33	0.84	
100	0.185	0.225	0.41	
125	0.105	0.105	0.21	
150	0.045	0.045	0.09	
175	0.015	0.045	0.06	
200	0.04	0.04	0.08	

STATION: 687
DATE: 04.0
TIME: 10°01.5'S
LATITUDE: 55°27.7'E
LONGITUDE:

Station 687

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.155	0.055	0.21	54.05
0.155	0.055	0.21	
0.185	0.045	0.23	
0.31	0.13	0.44	
0.27	0.21	0.48	
0.14	0.12	0.26	
0.315	0.205	0.42	
0.08	0.075	0.155	
0.02	0.03	0.05	
0.015	0.035	0.05	

STATION: 688
DATE: 5/14
TIME: 12.5
LATITUDE: 09°56.0'S
LONGITUDE: 56°53.0'E

Station 688

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.165	0.045	0.21	24.075
10	0.145	0.045	0.19	
25	0.25	0.07	0.32	
50	0.37	0.17	0.54	
75	0.215	0.165	0.38	
100	0.115	0.105	0.22	
125	0.06	0.05	0.11	
150	0.04	0.03	0.07	
175	0.015	0.025	0.04	
200	0.005	0.015	0.02	

STATION: 689
DATE: 5/14
TIME: 22.2
LATITUDE: 09°56.2'S
LONGITUDE: 58°20.3'E

Station 689

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.145	0.065	0.21	36.175
0.205	0.055	0.26	
0.175	0.055	0.23	
0.31	0.13	0.44	
0.255	0.125	0.38	
0.285	0.115	0.40	
0.06	0.03	0.09	
0.05	0.03	0.08	
0.02	0.03	0.05	
0.015	0.025	0.04	

STATION: 690
DATE: 5/15
TIME: 08.2
LATITUDE: 09°42.0'S
LONGITUDE: 59°49.0'E

Station 690

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.06	0.01	0.07	51.89
10	0.175	0.03	0.205	
25	0.335	0.045	0.38	
50	0.37	0.20	0.57	
75	0.37	0.22	0.59	
100	0.155	0.135	0.29	
125	0.02	0.09	0.11	
150	0.01	0.03	0.04	
175	0.005	0.035	0.04	
200	0.01	0.02	0.03	

STATION: 691
DATE: 5/15
TIME: 16.5
LATITUDE: 09°28.0'S
LONGITUDE: 61°11.0'E

Station 691

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.145	0.025	0.17	35.31
10	0.15	0.025	0.175	
25	0.195	0.025	0.22	
50	0.42	0.085	0.505	
75	0.205	0.065	0.27	
100	0.075	0.06	0.135	
125	0.045	0.035	0.08	
150	0.02	0.03	0.05	
175	0.025	0.035	0.06	
200	0.01	0.02	0.03	

STATION: 692
DATE: 5/15
TIME: 03.5
LATITUDE: 09°12.0'S
LONGITUDE: 62°32.0'E

Station 692

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.12	0.01	0.13	41.085
10	0.16	0.01	0.17	
25	0.185	0.015	0.20	
50	0.33	0.08	0.41	
75	0.31	0.13	0.44	
100	0.165	0.145	0.31	
125	0.045	0.03	0.075	
150	0.04	0.025	0.065	
175	0.025	0.035	0.06	
200	0.005	0.02	0.025	

STATION: 693
DATE: 5/16
TIME: 11.5
LATITUDE: 08°57.0'S
LONGITUDE: 63°55.0'E

Station 693

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.105	0.035	0.14	51.00
10	0.075	0.045	0.12	
25	0.26	0.03	0.29	
50	0.265	0.165	0.43	
75	0.245	0.205	0.45	
100	0.225	0.195	0.42	
125	0.11	0.08	0.19	
150	0.04	0.09	0.13	
175	0.035	0.04	0.075	
200	0.015	0.035	0.05	

STATION: 694
DATE: 5/16
TIME: 22.0
LATITUDE: 08°43.8'S
LONGITUDE: 65°33.8'E

Station 694

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.08	0.02	0.10	43.975
10	0.10	0.01	0.11	
25	0.105	0.025	0.13	
50	0.195	0.035	0.23	
75	0.35	0.18	0.53	
100	0.245	0.135	0.38	
125	0.08	0.11	0.19	
150	0.065	0.075	0.14	
175	0.025	0.045	0.07	
200	0.02	0.06	0.08	

STATION: 695
DATE: 5/17
TIME: 09.5
LATITUDE: 08°30.2'S
LONGITUDE: 66°49.0'E

Station 695

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.07	0.02	0.09	35.46
10	0.10	0.01	0.11	
25	0.12	0.015	0.135	
50	0.22	0.025	0.245	
75	0.37	0.075	0.445	
100	0.165	0.105	0.27	
125	0.12	0.04	0.16	
150	0.02	0.03	0.05	
175	0.02	0.03	0.05	
200	0.00	0.03	0.03	

STATION: 696
DATE: 5/17
TIME: 16.5
LATITUDE: 08°19.0'S
LONGITUDE: 68°00.0'E

Station 696

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.075	0.015	0.09	48.10
10	0.105	0.025	0.13	
25	0.065	0.005	0.07	
50	0.37	0.085	0.455	
75	0.15	0.31	0.46	
100	0.31	0.12	0.43	
125	0.07	0.07	0.14	
150	0.08	0.07	0.15	
175	0.02	0.11	0.13	
200	0.01	0.03	0.04	

STATION: 697
DATE: 5/17
TIME: 11.2
LATITUDE: 08°07.0'S
LONGITUDE: 69°00.5'E

Station 697

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.04	0.01	0.05	32.75
10	0.04	0.01	0.05	
25	0.06	0.015	0.075	
50	0.065	0.025	0.09	
75	0.205	0.155	0.36	
100	0.235	0.155	0.39	
125	0.105	0.065	0.17	
150	0.06	0.07	0.13	
175	0.025	0.035	0.06	
200	0.00	0.03	0.03	

STATION: 698
DATE: 5/18
TIME: 07.7
LATITUDE: 07°54.0'S
LONGITUDE: 70°00.5'E

Station 698

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.07	0.01	0.08	38.94
10	0.07	0.01	0.08	
25	0.065	0.015	0.08	
50	0.28	0.05	0.33	
75	0.29	0.165	0.455	
100	0.125	0.135	0.26	
125	0.09	0.105	0.195	
150	0.06	0.06	0.12	
175	0.02	0.04	0.06	
200	0.01	0.02	0.03	

STATION: 699
DATE: 5/18
TIME: 15.5
LATITUDE: 07°38.0'S
LONGITUDE: 71°00.0'E

Station 699

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.06	0.03	0.09	30.30
10	0.07	0.02	0.09	
25	0.075	0.025	0.10	
50	0.215	0.095	0.31	
75	0.29	0.28	0.57	
100	0.115	0.145	0.26	
125	0.07	0.08	0.15	
150	0.03	0.05	0.08	
175	0.025	0.045	0.07	
200	0.02	0.03	0.05	

STATION: 700
DATE: 5/18
TIME: 21.0
LATITUDE: 07°32.0'S
LONGITUDE: 71°26.0'E

Station 700

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.055	0.025	0.08	34.425
10	0.055	0.015	0.07	
25	0.09	0.03	0.12	
50	0.24	0.13	0.37	
75	0.195	0.135	0.33	
100	0.105	0.105	0.21	
125	0.08	0.08	0.16	
150	0.04	0.05	0.09	
175	0.02	0.03	0.05	
200	0.01	0.03	0.04	

STATION: 701
DATE: 5/20
TIME: 10.0
LATITUDE: 05°07.5'S
LONGITUDE: 70°02.0'E

Station 701

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.075	0.025	0.10	53.175
10	0.115	0.025	0.14	
25	0.165	0.025	0.19	
50	0.33	0.13	0.46	
75	0.31	0.12	0.43	
100	0.115	0.475	0.59	
125	0.075	0.055	0.13	
150	0.04	0.15	0.19	
175	0.04	0.03	0.07	
200	0.01	0.02	0.03	

STATION: 702
DATE: 5/20
TIME: 19.5
LATITUDE: 05°00.0'S
LONGITUDE: 68°39.0'E

Station 702

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.055	0.025	0.08	38.975
10	0.065	0.025	0.09	
25	0.075	0.035	0.11	
50	0.39	0.15	0.54	
75	0.225	0.125	0.35	
100	0.105	0.115	0.22	
125	0.055	0.065	0.12	
150	0.04	0.06	0.10	
175	0.02	0.04	0.06	
200	0.01	0.03	0.04	

STATION: 703
DATE: 5/21
TIME: 05.5
LATITUDE: 05°03.5'S
LONGITUDE: 67°17.0'E

Station 703

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.055	0.025	0.08	43.675
10	0.07	0.04	0.11	
25	0.085	0.035	0.12	
50	0.135	0.055	0.19	
75	0.235	0.145	0.38	
100	0.215	0.215	0.43	
125	0.32	0.075	0.395	
150	0.05	0.05	0.10	
175	0.02	0.04	0.06	
200	0.015	0.035	0.05	

STATION: 704
DATE: 5/21
TIME: 13.2
LATITUDE: 05°04.0'S
LONGITUDE: 65°51.0'E

Station 704

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.075	0.015	0.09	52.575
10	0.075	0.025	0.10	
25	0.135	0.015	0.15	
50	0.45	0.08	0.53	
75	0.49	0.12	0.61	
100	0.185	0.155	0.34	
125	0.155	0.105	0.26	
150	0.04	0.05	0.09	
175	0.02	0.04	0.06	
200	0.015	0.035	0.05	

STATION: 705
DATE: 5/21
TIME: 23.0
LATITUDE: 05°01.0'S
LONGITUDE: 64°32.0'E

Station 705

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.07	0.02	0.09	30.29
10	0.07	0.03	0.10	
25	0.08	0.04	0.12	
50	0.135	0.145	0.18	
75	0.155	0.105	0.26	
100	0.135	0.145	0.28	
125	0.075	0.075	0.15	
150	0.05	0.04	0.09	
175	0.02	0.045	0.065	
200	0.02	0.025	0.45	

STATION: 706
DATE: 5/22
TIME: 09.5
LATITUDE: 04°56.5'S
LONGITUDE: 63°07.0'E

Station 706

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.065	0.025	0.09	44.525
10	0.065	0.025	0.09	
25	0.075	0.035	0.11	
50	0.195	0.075	0.27	
75	0.35	0.26	0.61	
100	0.175	0.215	0.39	
125	0.07	0.11	0.18	
150	0.06	0.055	0.115	
175	0.015	0.035	0.05	
200	0.005	0.025	0.03	

STATION: 707
DATE: 5/22
TIME: 17.0
LATITUDE: 04°53.0'S
LONGITUDE: 61°50.0'E

Station 707

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.075	0.035	0.11	42.525
10	0.10	0.02	0.12	
25	0.10	0.03	0.13	
50	0.265	0.13	0.395	
75	0.265	0.13	0.395	
100	0.155	0.125	0.28	
125	0.105	0.125	0.23	
150	0.025	0.085	0.11	
175	0.02	0.06	0.08	
200	0.02	0.03	0.05	

STATION: 708
DATE: 5/23
TIME: 04.0
LATITUDE: 04°57.0'S
LONGITUDE: 60°26.0'E

Station 708

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.09	0.03	0.12	50.49
10	0.105	0.04	0.145	
25	0.155	0.055	0.21	
50	0.41	0.21	0.62	
75	0.255	0.225	0.48	
100	0.115	0.125	0.24	
125	0.035	0.105	0.14	
150	0.045	0.045	0.09	
175	0.085	0.075	0.16	
200	0.015	0.035	0.05	

STATION: 709
DATE: 5/23
TIME: 13.0
LATITUDE: 04°55.5'S
LONGITUDE: 59°02.1'E

Station 709

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.115	0.055	0.17	53.15
10	0.165	0.055	0.22	
25	0.48	0.11	0.59	
50	0.18	0.34	0.52	
75	0.215	0.165	0.38	
100	0.155	0.085	0.24	
125	0.09	0.07	0.16	
150	0.045	0.045	0.09	
175	0.04	0.05	0.09	
200	0.015	0.045	0.06	

STATION: 710
DATE: 5/23
TIME: 21.5
LATITUDE: 04°52.5'S
LONGITUDE: 58°17.1'E

Station 710

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.115	0.015	0.13	42.550
10	0.175	0.055	0.23	
25	0.505	0.215	0.72	
50	0.195	0.175	0.37	
75	0.145	0.115	0.26	
100	0.095	0.065	0.16	
125	0.035	0.035	0.07	
150	0.02	0.03	0.05	
175	0.02	0.03	0.05	
200	0.01	0.04	0.05	

STATION: 711
DATE: 5/24
TIME: 07.5
LATITUDE: 04°43.0'S
LONGITUDE: 57°00.0'E

Station 711

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.41	0.12	0.53	59.725
0.45	0.10	0.55	
0.525	0.135	0.66	
0.585	0.215	0.80	
0.23	0.20	0.43	
0.05	0.055	0.105	
0.02	0.03	0.05	
0.01	0.04	0.05	
0.005	0.025	0.03	
0.005	0.025	0.03	

STATION: 712
DATE: 5/27
TIME: 03.0
LATITUDE: 05°20.0'S
LONGITUDE: 54°15.0'E

Station 712

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.165	0.025	0.19	47.00
10	0.225	0.065	0.29	
25	0.225	0.065	0.29	
50	0.265	0.13	0.395	
75	0.30	0.22	0.52	
100	0.17	0.20	0.37	
125	0.03	0.04	0.07	
150	0.02	0.03	0.05	
175	0.01	0.03	0.04	
200	0.005	0.035	0.04	

STATION: 713
DATE: 5/28
TIME: 13.2
LATITUDE: 06°27.0'S
LONGITUDE: 53°12.0'E

Station 713

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.235	0.035	0.27	34.250
0.225	0.045	0.27	
0.605	0.115	0.72	
0.33	0.15	0.48	
0.195	0.175	0.37	
0.07	0.06	0.13	
0.04	0.05	0.09	
0.02	0.03	0.05	
0.005	0.035	0.04	
0.005	0.025	0.03	

STATION: 714
DATE: 5/28
TIME: 19.5
LATITUDE: 07°28.0'S
LONGITUDE: 52°42.0'E

Station 714

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.175	0.02	0.195	28.137
10	0.135	0.02	0.155	
25	0.105	0.025	0.13	
50	0.125	0.115	0.24	
75	0.105	0.095	0.20	
100	0.145	0.105	0.25	
125	0.07	0.04	0.11	
150	0.02	0.03	0.05	
175	0.01	0.03	0.04	
200	0.005	0.025	0.03	

STATION: 715
DATE: 5/29
TIME: 06.0
LATITUDE: 08°37.0'S
LONGITUDE: 52°07.0'E

Station 715

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.225	0.075	0.30	43.65
0.245	0.085	0.33	
0.28	0.09	0.37	
0.34	0.20	0.54	
0.185	0.135	0.32	
0.115	0.095	0.21	
0.02	0.04	0.06	
0.02	0.03	0.05	
0.01	0.02	0.03	
0.005	0.025	0.03	

STATION: 716
DATE: 5/31
TIME: 12.5
LATITUDE: 15°03.0'S
LONGITUDE: 50°34.0'E

Station 716

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.45	0.09	0.54	56.175
10	0.545	0.065	0.61	
25	0.225	0.305	0.53	
50	0.195	0.045	0.24	
75	0.18	0.05	0.23	
100	0.35	0.22	0.57	
125	0.10	0.10	0.20	
150	0.05	0.05	0.10	
175	0.015	0.025	0.04	
200	0.035	0.025	0.06	

STATION: 717
DATE: 5/31
TIME: 19.5
LATITUDE: 15°08.0'S
LONGITUDE: 51°12.0'E

Station 717

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.10	0.02	0.12	37.588
0.09	0.025	0.115	
0.11	0.02	0.13	
0.095	0.025	0.12	
0.125	0.015	0.14	
0.28	0.20	0.48	
0.185	0.135	0.32	
0.03	0.07	0.10	
0.055	0.045	0.10	
0.035	0.035	0.07	

STATION: 718
DATE: 5/31
TIME: (22.8)
LATITUDE: 15°16.8'S
LONGITUDE: 51°52.0'E

Station 718

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 719
DATE: 6/1
TIME: 14.0
LATITUDE: 15°36.5'S
LONGITUDE: 53.23.0'E

Station 719

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.10	0.01	0.11	32.475
10	0.13	0.02	0.15	
25	0.19	0.05	0.24	
50	0.20	0.02	0.22	
75	0.195	0.095	0.29	
100	0.15	0.11	0.26	
125	0.085	0.085	0.17	
150	0.035	0.105	0.14	
175	---	---	---	
200	---	---	---	

STATION: 720
DATE: 6/1
TIME: 22.0
LATITUDE: 15°51.0'S
LONGITUDE: 54°36.5'E

Station 720

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.155	0.035	0.19	48.725
10	0.195	0.045	0.24	
25	0.175	0.045	0.22	
50	0.245	0.065	0.31	
75	0.235	0.055	0.29	
100	0.195	0.16	0.355	
125	0.215	0.095	0.31	
150	0.105	0.09	0.195	
175	0.06	0.055	0.115	
200	0.06	0.02	0.08	

STATION: 721
DATE: 6/2
TIME: 09.5
LATITUDE: 16°09.0'S
LONGITUDE: 55°59.0'E

Station 721

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.08	0.02	0.10	44.150
10	0.115	0.025	0.14	
25	0.135	0.035	0.17	
50	0.105	0.035	0.14	
75	0.165	0.025	0.19	
100	0.27	0.17	0.44	
125	0.195	0.175	0.37	
150	0.125	0.095	0.22	
175	0.07	0.08	0.15	
200	0.03	0.03	0.06	

STATION: 722
DATE: 6/2
TIME: 18.0
LATITUDE: 16°24.8'S
LONGITUDE: 57°14.0'E

Station 722

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.21	0.02	0.23	55.962
10	0.23	0.03	0.26	
25	0.235	0.04	0.275	
50	0.345	0.025	0.37	
75	0.46	0.18	0.64	
100	0.205	0.15	0.355	
125	0.14	0.10	0.24	
150	0.095	0.065	0.16	
175	0.05	0.01	0.06	
200	0.025	0.015	0.04	

STATION: 723
DATE: 6/3
TIME: (00.1)
LATITUDE: 16°44.5'S
LONGITUDE: 58°56.0'E

Station 723

Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
Did not take samples.			

STATION: 724
DATE: 6/3
TIME: 10.0
LATITUDE: 16°57.0'S
LONGITUDE: 59°31.5'E

Station 724

Depth	Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
0	0.04	0.07	0.11	21.838
10	0.04	0.055	0.095	
25	0.05	0.08	0.13	
50	0.14	0.01	0.15	
75	0.10	0.04	0.14	
100	0.095	0.045	0.15	
125	0.07	0.025	0.095	
150	0.05	0.035	0.085	
175	0.03	0.025	0.055	
200	0.025	0.025	0.05	

STATION: 725
DATE: 6/3
TIME: (19.2)
LATITUDE: 17°59.0'S
LONGITUDE: 60°55.0'E

Station 725

Chl a mg/m^3	Phaeo mg/m3	Total mg/m3	Pigment mg/m^2
Did not take samples.			

STATION: 726
DATE: 6/5
TIME: (11.6)
LATITUDE: 19°31.5'S
LONGITUDE: 63°12.5'E

Station 726

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 727
DATE: 6/5
TIME: 01.0
LATITUDE: 18°54.1'S
LONGITUDE: 61°52.0'E

Station 727

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.025	0.005	0.03	34.539
10	0.07	0.035	0.105	
25	0.09	0.02	0.11	
50	0.12	0.015	0.135	
75	0.135	0.025	0.16	
100	0.195	0.105	0.30	
125	0.21	0.13	0.34	
150	0.075	0.075	0.15	
175	0.06	0.05	0.11	
200	0.04	0.03	0.07	

STATION: 728
DATE: 6/6
TIME: (06.3)
LATITUDE: 20°04.7'S
LONGITUDE: 61°01.2'E

Station 728

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 729
DATE: 6/6
TIME: 18.0
LATITUDE: 19°56.0'S
LONGITUDE: 59°40.0'E

Station 729

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.065	0.01	0.075	29.675
10	0.065	0.00	0.065	
25	0.06	0.005	0.065	
50	0.065	0.00	0.065	
75	0.14	0.025	0.165	
100	0.24	0.09	0.33	
125	0.14	0.135	0.275	
150	0.105	0.085	0.19	
175	0.035	0.015	0.05	
200	0.015	0.01	0.025	

STATION: 730
DATE: 6/6
TIME: 01.5
LATITUDE: 19°59.5'S
LONGITUDE: 58°48.0'E

Station 730

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.03	0.00	0.03	15.438
10	0.035	0.005	0.04	
25	0.05	0.005	0.055	
50	0.045	0.00	0.045	
75	---	---	---	
100	0.105	0.035	0.14	
125	0.12	0.02	0.14	
150	0.04	0.03	0.07	
175	0.025	0.015	0.04	
200	0.015	0.005	0.02	

STATION: 731
DATE: 6/7
TIME: (05.9)
LATITUDE: 20°01.1'S
LONGITUDE: 57°53.8'E

Station 731

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
Did not take samples.			

STATION: 732
DATE: 6/11
TIME: (01.8)
LATITUDE: 19°53.0'S
LONGITUDE: 56°48.0'E

Station 732

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.27	0.01	0.28	26.163
10	0.12	0.03	0.15	
25	0.09	0.02	0.11	
50	0.065	0.045	0.11	
75	0.095	0.035	0.13	
100	0.175	0.145	0.32	
125	0.085	0.085	0.17	
150	0.02	0.03	0.05	
175	0.015	0.02	0.035	
200	0.01	0.015	0.025	

STATION: 733
DATE: 6/11
TIME: (12.4)
LATITUDE: 19°56.0'S
LONGITUDE: 55°17.0'E

Station 733

Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0.095	0.015	0.11	23.926
0.045	0.035	0.08	
0.11	0.04	0.15	
0.05	0.05	0.10	
0.095	0.025	0.12	
0.225	0.155	0.38	
0.045	0.06	0.105	
0.01	0.02	0.03	
0.015	0.015	0.03	
0.01	0.01	0.02	

STATION: 734
DATE: 6/11
TIME: (21.8)
LATITUDE: 19°58.2'S
LONGITUDE: 53°53.0'E

Station 734

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.065	0.045	0.11	32.975
10	0.08	0.02	0.10	
25	0.06	0.03	0.09	
50	0.015	0.07	0.085	
75	0.13	0.05	0.18	
100	0.255	0.14	0.395	
125	0.14	0.11	0.25	
150	0.07	0.05	0.12	
175	---	---	---	
200	0.025	0.06	0.085	

STATION: 735
DATE: 6/12
TIME: (06.8)
LATITUDE: 20°01.8'S
LONGITUDE: 52°30.2'E

Station 735

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.13	0.02	0.15	30.150
10	0.08	0.005	0.085	
25	0.12	0.00	0.12	
50	0.14	0.00	0.14	
75	0.13	0.00	0.13	
100	0.165	0.08	0.245	
125	0.11	0.15	0.26	
150	0.095	0.075	0.17	
175	0.035	0.03	0.065	
200	0.035	0.015	0.05	

STATION: 736
DATE: 6/12
TIME: (16.6)
LATITUDE: 19°59.5'S
LONGITUDE: 51°04.5'E

Station 736

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.045	0.045	0.09	35.788
10	0.08	0.005	0.085	
25	0.11	0.01	0.12	
50	0.045	0.025	0.07	
75	0.13	0.02	0.15	
100	0.24	0.10	0.34	
125	0.06	0.11	0.17	
150	0.065	0.13	0.195	
175	0.05	0.035	0.085	
200	0.015	0.015	0.03	

STATION: 737
DATE: 6/12
TIME: (23.2)
LATITUDE: 19°59.5'S
LONGITUDE: 50°06.5'E

Station 737

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.055	0.055	0.11	32.913
10	0.06	0.055	0.115	
25	0.075	0.04	0.115	
50	0.105	0.025	0.13	
75	0.185	0.015	0.20	
100	0.305	0.165	0.47	
125	0.09	0.14	0.23	
150	0.025	0.035	0.06	
175	0.03	0.01	0.04	
200	0.01	0.02	0.03	

STATION: 738
DATE: 6/13
TIME: (03.4)
LATITUDE: 20°08.0'S
LONGITUDE: 49°34.0'E

Station 738

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 739
DATE: 6/13
TIME: (07.4)
LATITUDE: 20°05.0'S
LONGITUDE: 49°00.0'E

Station 739

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.11	0.03	0.14	32.300
10	0.135	0.025	0.16	
25	0.185	0.045	0.23	
50	0.20	0.035	0.235	
75	0.185	0.035	0.22	
100	0.195	0.215	0.41	
125	0.03	0.08	0.11	
150	0.03	0.02	0.05	
175	---	---	---	
200	---	---	---	

STATION:
DATE:
TIME:
LATITUDE:
LONGITUDE:

Station

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	No samples were taken at any			
10	stations between 739 and 755.			
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 755
DATE: 6/19
TIME: 13.00
LATITUDE: 25°56.0'S
LONGITUDE: 36°42.0'E

Station 755

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.185	0.045	0.23	45.650
10	0.195	0.035	0.23	
25	0.30	0.05	0.35	
50	0.36	0.085	0.445	
75	0.37	0.085	0.455	
100	0.105	0.085	0.19	
125	0.08	0.06	0.14	
150	0.045	0.035	0.08	
175	0.005	0.045	0.05	
200	0.01	0.04	0.05	

STATION: 756
DATE: 6/19
TIME: 18.00
LATITUDE: 25°53.0'S
LONGITUDE: 36°09.0'E

Station 756

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.11	0.03	0.14	36.725
10	0.11	0.00	0.11	
25	0.19	0.03	0.22	
50	0.33	0.05	0.38	
75	0.265	0.095	0.36	
100	0.23	0.11	0.34	
125	0.04	0.02	0.06	
150	0.025	0.015	0.04	
175	0.01	0.01	0.02	
200	0.015	0.005	0.02	

STATION: 757
DATE: 6/19
TIME: (23.7)
LATITUDE: 25°54.5'S
LONGITUDE: 35°17.8'E

Station 757

Did not take samples.

STATION: 758
DATE: 6/20
TIME: (03.0)
LATITUDE: 25°56.5'S
LONGITUDE: 34°45.0'E

Station 758

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	Did not take samples.			
10				
25				
50				
75				
100				
125				
150				
175				
200				

STATION: 759
DATE: 6/20
TIME: 09.5
LATITUDE: 25°59.0'S
LONGITUDE: 34°10.5'E

Station 759

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.71	0.10	0.81	69.775
10	0.69	0.10	0.79	
25	1.45	0.16	1.61	
50	1.41	0.12	1.53	
75	0.67	0.10	0.77	
100	0.11	0.06	0.17	
125	0.08	0.05	0.13	
150	0.04	0.045	0.085	
175	0.025	0.025	0.05	
200	0.01	0.02	0.03	

STATION: 760
DATE: 6/20
TIME: 14.0
LATITUDE: 25°58.5'S
LONGITUDE: 33°39.0'E

Station 760

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.15	0.01	0.16	53.015
10	0.51	0.03	0.54	
25	0.42	0.05	0.47	
50	0.59	0.075	0.665	
75	---	---	---	
100	0.11	0.08	0.19	
125	0.04	0.035	0.075	
150	0.02	0.025	0.045	
175	0.015	0.015	0.03	
200	0.005	0.015	0.02	

STATION: 761
DATE: 6/28
TIME: 23.8
LATITUDE: 31°32.0'S
LONGITUDE: 34°32.0'E

Station 761

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.33	0.06	0.39	38.750
10	0.32	0.07	0.39	
25	0.38	0.06	0.44	
50	0.265	0.085	0.35	
75	0.375	0.035	0.41	
100	0.065	0.025	0.09	
125	0.02	0.01	0.03	
150	0.015	0.015	0.03	
175	0.005	0.005	0.01	
200	0.01	0.00	0.01	

STATION: 762
DATE: 6/28
TIME: 23.5
LATITUDE: 31°57.5'S
LONGITUDE: 36°56.0'E

Station 762

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.18	0.03	0.21	35.600
10	0.335	0.045	0.38	
25	0.415	0.105	0.52	
50	0.335	0.065	0.40	
75	0.085	0.035	0.12	
100	0.06	0.035	0.095	
125	0.045	0.02	0.065	
150	0.015	0.035	0.05	
175	0.01	0.025	0.035	
200	0.01	0.01	0.02	

STATION: 763
DATE: 6/29
TIME: (20.7)
LATITUDE: 32°0.50'S
LONGITUDE: 40°49.0'E

Station 763

Did not take samples.

STATION: 764
DATE: 6/30
TIME: 19.0
LATITUDE: 32°01.0'S
LONGITUDE: 44°25.0'E

Station 764

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.205	0.035	0.24	37.300
10	---	---	---	
25	0.25	0.08	0.33	
50	0.26	0.06	0.32	
75	---	---	---	
100	0.14	0.02	0.16	
125	0.08	0.04	0.12	
150	0.045	0.02	0.065	
175	0.02	0.01	0.03	
200	0.01	0.005	0.015	

STATION: 765
DATE: 7/1
TIME: 00.5
LATITUDE: 32°01.8'S
LONGITUDE: 49°55.5'E

Station 765

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.08	0.04	0.12	25.520
10	0.13	0.04	0.17	
25	0.15	0.015	0.165	
50	0.135	0.03	0.165	
75	0.13	0.035	0.165	
100	0.11	0.02	0.13	
125	0.085	0.045	0.13	
150	0.035	0.05	0.085	
175	0.045	0.035	0.08	
200	0.03	0.015	0.045	

STATION: 766
DATE: 7/2
TIME: 04.0
LATITUDE: 32°00.5'S
LONGITUDE: 55°07.5'E

Station 766

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.165	0.025	0.19	36.225
10	0.185	0.015	0.20	
25	0.155	0.025	0.18	
50	0.19	0.02	0.21	
75	0.205	0.095	0.30	
100	---	---	---	
125	0.12	0.04	0.16	
150	0.07	0.05	0.12	
175	0.04	0.07	0.11	
200	0.04	0.035	0.075	

STATION: 767
DATE: 7/4
TIME: 09.5
LATITUDE: 31°59.0'S
LONGITUDE: 60°52.5'E

Station 767

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.25	0.03	0.28	43.000
10	---	---	---	
25	0.315	0.03	0.35	
50	0.29	0.07	0.36	
75	0.25	0.05	0.30	
100	0.26	0.04	0.30	
125	0.43	0.02	0.45	
150	0.065	0.015	0.08	
175	0.025	0.03	0.055	
200	0.01	0.02	0.03	

STATION: 768
DATE: 7/5
TIME: 09.0
LATITUDE: 32°01.8'S
LONGITUDE: 65°29.1'E

Station 768

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.135	0.015	0.15	35.345
10	0.09	0.06	0.15	
25	0.155	0.03	0.185	
50	0.12	0.03	0.15	
75	0.215	0.08	0.295	
100	0.27	0.10	0.37	
125	0.115	0.095	0.21	
150	0.055	0.035	0.09	
175	0.02	0.01	0.03	
200	0.015	0.015	0.03	

STATION: 769
DATE: 7/5
TIME: 13.8
LATITUDE: 31°59.0'S
LONGITUDE: 70°42.5'E

Station 769

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.145	0.025	0.17	28.840
10	0.225	0.00	0.225	
25	0.20	0.03	0.23	
50	0.165	0.005	0.17	
75	0.16	0.00	0.16	
100	---	---	---	
125	0.17	0.06	0.23	
150	0.095	0.05	0.145	
175	0.055	0.045	0.10	
200	0.03	0.015	0.045	

STATION: 770
DATE: 7/7
TIME: 16.2
LATITUDE: 31°55.0'S
LONGITUDE: 75°35.5'E

Station 770

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.20	0.04	0.24	31.225
10	0.185	0.035	0.22	
25	0.145	0.035	0.18	
50	0.20	0.05	0.25	
75	0.20	0.04	0.24	
100	0.145	0.08	0.225	
125	0.095	0.055	0.15	
150	0.03	0.02	0.05	
175	0.015	0.01	0.025	
200	0.00	0.01	0.01	

STATION: 771
DATE: 7/9
TIME: 03.0
LATITUDE: 31°59.8'S
LONGITUDE: 82°11.5'E

Station 771

Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.265	0.035	0.30	40.175
10	0.155	0.085	0.24	
25	0.24	0.05	0.29	
50	0.19	0.05	0.24	
75	0.20	0.04	0.24	
100	0.295	0.055	0.35	
125	0.10	0.065	0.165	
150	0.065	0.055	0.12	
175	0.035	0.025	0.06	
200	0.03	0.01	0.04	

STATION: 772
DATE: 7/10
TIME: 03.5
LATITUDE: 32°02.5'S
LONGITUDE: 87°00.0'E

Station 772

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.23	0.04	0.27	37.875
10	0.185	0.035	0.22	
25	0.25	0.03	0.28	
50	0.20	0.04	0.24	
75	0.185	0.075	0.26	
100	0.175	0.055	0.23	
125	0.145	0.035	0.18	
150	0.09	0.04	0.13	
175	0.05	0.02	0.07	
200	0.02	0.015	0.035	

STATION: 773
DATE: 7/10
TIME: 06.0
LATITUDE: 32°01.5'S
LONGITUDE: 92°10.5'E

Station 773

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.23	0.04	0.27	48.475
10	0.245	0.035	0.28	
25	0.25	0.05	0.30	
50	0.21	0.03	0.24	
75	0.255	0.065	0.32	
100	0.195	0.04	0.235	
125	0.21	0.07	0.28	
150	0.23	0.085	0.315	
175	0.07	0.025	0.095	
200	0.03	0.01	0.04	

STATION: 774
DATE: 7/12
TIME: 12.5
LATITUDE: 32°00.0'S
LONGITUDE: 97°51.0'E

Station 774

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.31	0.045	0.355	52.380
10	0.205	0.055	0.26	
25	0.205	0.085	0.29	
50	0.23	0.07	0.30	
75	0.235	0.065	0.30	
100	0.105	0.06	0.165	
125	0.07	0.025	0.095	
150	0.04	0.02	0.06	
175	0.01	0.01	0.02	
200	0.01	0.005	0.015	

STATION: 775
DATE: 7/13
TIME: 17.5
LATITUDE: 32°00.6'S
LONGITUDE: 103°58.5'E

Station 775

Depth	Chl a mg/m3	Phaeo mg/m3	Total mg/m3	Pigment mg/m2
0	0.25	0.05	0.30	53.325
10	0.23	0.06	0.29	
25	0.255	0.055	0.31	
50	0.235	0.065	0.30	
75	0.245	0.125	0.37	
100	0.24	0.11	0.35	
125	0.175	0.065	0.24	
150	0.18	0.055	0.235	
175	0.105	0.035	0.14	
200	0.065	0.025	0.09	

STATION:	776	STATION:	777
DATE:	7/14	DATE:	7/16
TIME:	22.5	TIME:	06.5
LATITUDE:	32°00.1'S	LATITUDE:	32°00.1'S
LONGITUDE:	109°17.0'E	LONGITUDE:	114°53.0'E

	Station 776				Station 777			
Depth	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2	Chl a mg/m^3	Phaeo mg/m^3	Total mg/m^3	Pigment mg/m^2
0	0.25	0.05	0.30	51.025	0.09	0.055	0.145	35.380
10	0.295	0.065	0.36		0.105	0.045	0.15	
25	0.295	0.075	0.37		0.365	0.075	0.44	
50	0.32	0.08	0.40		0.255	0.055	0.31	
75	0.295	0.06	0.355		0.15	0.045	0.195	
100	0.31	0.08	0.39		0.13	0.055	0.185	
125	0.10	0.06	0.16		0.80	0.05	0.13	
150	0.065	0.055	0.12		0.05	0.02	0.07	
175	0.03	0.035	0.065		0.03	0.015	0.045	
200	0.025	0.005	0.03		0.04	0.02	0.06	

Observations end at Freemantle, Australia after Station 777.

Woods Hole Oceanographic Institution
Reference No. 66-12

THE DISTRIBUTION OF CHLOROPHYLL IN THE WESTERN INDIAN OCEAN DURING THE NORTHEAST MONSOON PERIOD, February 13--July 16, 1965 by David A. McGill and Thomas J. Lawson, Jr. 69 pp. 3 fig. Technical Report. April 1966. National Science Foundation Grant GP-821.

This report contains the observations of phytoplankton pigment characteristics made during ATLANTIS II Cruise No. 15 in the western Indian Ocean and its reaches during the Northeast Monsoon in 1965. Data are given for the chlorophyll a and the phaeophytin fractions as well as for the total pigment measurement and the integrated total pigment. Comparable data is available from an earlier cruise in 1963 during the Southwest Monsoon, and some statistical comparisons of the two periods are presented. In the 1965 data the regional variation is minimal, with no pronounced variation between the northern and southern hemispheres.

1. Phytoplankton pigment measurements
   a. Chlorophyll a
   b. Phaeophytin
   c. Total Pigment
   d. Integrated total pigment
2. Western Indian Ocean
3. Northeast Monsoon

I. McGill, David A.

II. Lawson, Thomas J., Jr.

III. National Science Foundation Grant GP 821

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This report contains the observations of phytoplankton pigment characteristics made during ATLANTIS II Cruise No. 15 in the western Indian Ocean and its reaches during the Northeast Monsoon in 1965. Data are given for the chlorophyll a and the phaeophytin fractions as well as for the total pigment measurement and the integrated total pigment. Comparable data is available from an earlier cruise in 1963 during the Southwest Monsoon, and some statistical comparisons of the two periods are presented. In the 1965 data the regional variation is minimal, with no pronounced variation between the northern and southern hemispheres.

1. Phytoplankton pigment measurements
   a. Chlorophyll a
   b. Phaeophytin
   c. Total Pigment
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2. Western Indian Ocean
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